An Address

ON

THE EXISTENCE OF ORGANIC DISEASE IN THE ABSENCE OF OBVIOUS SYMPTOMS.

Delivered before the Wimbledon and District Medical Society on Feb. 13th, 1903,

By J. R. BRADFORD, M.D., F.R.C.P. Lond., F.R.S.,

PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL.

GENTLEMEN,—The *diseases which I wish to bring before* your notice this evening form one of the many groups included under the *general term of* "latent diseases," but this expression is liable to some ambiguity owing to the fact that it is used for widely different *conditions.* The expression "latent disease" is often applied *to the* period that may intervene between the infection of the patient and the production of obvious signs and symptoms. In some maladies, as, for instance, syphilis or hydrophobia, this period may be *unduly prolonged in exceptional circumstances, but I do* not propose to deal with the many problems connected with this subject this evening. In other instances gross organic diseases may be present without attracting the attention of the patient either by symptoms or physical signs, and it is well known, to quote an extreme case, that large external tumours may sometimes be present which must have obviously existed for a considerable period and yet the patient's attention has only been attracted to the condition perhaps for a few days. Again it is not uncommon for the onset of *acute* disease to be ushered in with extremely equivocal symptoms. Thus, to take a well-known illustration, the onset of pneumonia may be characterised by an almost complete absence of chest symptoms, together with the presence *of others of a meningeal* or abdominal type In these circumstances unless great care is exercised, very serious errors of diagnosis and treatment may be made.

Although perhaps all these conditions might fall within the title of this address I do not propose to discuss such diseases to-night but to restrict my observations to the consideration of the occurrence or presence of serious and generally chronic diseases where no marked symptoms are present but yet where a careful examination will not fail to reveal the presence of the malady. *The importance of the* subject is increased by the fact that in a very large proportion of such cases the insidious malady present is a fatal one and not uncommonly an immediately fatal one. For our [illegible] be as accurate as [illegible] or the purposes of [illegible] al.

Diseases may be [illegible] *of* ways, from an etiological or [illegible] d the latter in many instances, [illegible] ably the more sound and *scientific.* For the purposes of the *clinician it is* certainly more useful and probably equally accurate to employ a classification based on the natural history of diseases—in other words, a classification based on the character of the symptoms presented. One may *on this* basis divide most maladies into three great groups: the acute, the chronic, and the latent, based on the presence or absence and the severity, if present, of the symptoms. The importance of the thorough study of symptoms must never be overlooked, especially when we remember that in many diseases symptoms only are present and probably in all diseases symptoms are the initial manifestations of the disorders. [illegible] dependent on our [illegible] ence o[illegible] gnition [illegible] appreciation of [illegible] of symptoms than by the detection [illegible] *is this the case,* but it may be s[illegible] *as it often does,* on the extent [illegible] always to be accurately gauged by physical signs. The extent *of* the lesions of organic disease is usually greater than what would have been expected from the physical signs, notwithstanding the great value of these in the *recognition of disease. For* this reason, as well as for the preceding ones, the intelligent study of symptoms is a matter of fundamental importance.

Although most diseases can be divided into the acute, the chronic, and the latent, according to the violence, if *present, or the absence of symptoms, as the case* may be, it must not be overlooked that acute symptoms *may* be produced, not only by the onset of acute diseases, but also by chronic and sometimes also by diseases hitherto latent and therefore producing no *symptoms.* The development of acute symptoms in these conditions may be due to a variety of causes

1. In some instances the occurrence of acute *symptoms* in the course of chronic and especially of latent disease may be due to an acute exacerbation in the morbid process. Familiar instances of this may be seen in perforative peritonitis. The perforation of a *gastric or of a typhoid* ulcer will lead to the production of symptoms more or less characteristic of the condition, provided the perforation *occurs in a patient who* has *presented* the symptoms of the underlying chronic or acute disorder, as the case may be. In a considerable proportion of cases, however, such *perforation occurs* in patients who have shown no symptoms of gastric ulcer or of typhoid fever; in other words, in cases where these diseases have run a latent course The violent and acute symptoms characteristic of perforation occurring in such cases will produce a clinical picture which may be indistinguishable from that seen in such an acute disease as the *most violent form of appendicitis.* These diseases afford a very good illustration of the onset of acute symptoms being *sometimes* due to an exacerbation or sudden increase in the extent of the underlying lesion and not dependent on the onset of an acute disease in a previously healthy person.

2 The onset of *acute symptoms in latent disease is not,* however, always dependent on a sudden increase of the lesion, as in the instances mentioned; more often it is dependent merely on a progressive development of the underlying malady. The sudden occurrence of acute uræmia in chronic renal disease affords a good illustration of this mode of causation. It is often supposed that the sudden development of acute symptoms in latent and chronic diseases is to be regarded as a result of the development of an acute and additional lesion. Thus the occurrence of uræmia in chronic Bright's disease is sometimes looked upon as dependent on the development of acute nephritis. This, *however, is* by no means invariably the *case,* and both in *experimental* physiology and pathology *many instances are to be found* of the *occurrence* of sudden and violent symptoms as the *mere* result of a slowly progressive lesion. In the case of glands—such as the thyroid, the suprarenal, and the *pancreas—it is* well known that very large quantities of these *glands may* be removed experimentally without producing any marked result, and that the subsequent removal of a further small amount, and in some instances a very small amount, may be followed by the immediate production of all the effects characteristic of the total loss of the gland Thus *seven-eighths* of the pancreas may be *removed* without any appreciable ill-effects; trenching on the remaining eighth is immediately followed by the development of marked *results.* Removal of all the thyroidal and parathyroidal tissue, with the exception of one para thyroid, is *not necessarily* followed by permanent ill-effects; but the removal of that one para-thyroid or of all the para thyroid, leaving the thyroid, is immediately followed by the development *of the characteristic* phenomena of athyroidea. It can *be seen from* these illustrations that the sudden development of acute symptoms in the course of a chronic or latent *disease is not necessarily to* be regarded as indicative of the onset *of* an acute lesion.

3 The onset of acute symptoms in the course of diseases *hitherto latent may* be *dependent,* not so much on any further development of the initial lesion, but rather on the presence of a complication; many illustrative instances of this are *available in* clinical medicine. Diabetes mellitus may not uncommonly, especially in the middle-aged, run practically a latent course and the gross underlying disease *may not* be detected until diabetic coma ensues as the result [illegible] intercurrent illness or perhaps as a sequel to trau-[illegible] y a case of diabetes has not been [illegible] atient not having sought advice [illegible] mptoms until a complication, such as coma or gangrene, has ensued as the result perhaps of a trivial injury. Another familiar instance of the same class *of facts* is afforded by the occurrence of retention of urine

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revealing the presence of some chronic disease of the spinal cord, such as tabes dorsalis, which perhaps up to that time had not produced symptoms attracting notice.

From the above illustrations we see that the development of acute symptoms in the course of latent diseases is by no means uncommon, but the subject matter that I wish to bring before you more especially is the occurrence of latent diseases without obvious symptoms. From this point of view these latent diseases may be divided into two great groups—the first consisting of those instances where latent diseases occur as complications of other and obvious maladies, and the complication produces either no obvious symptoms, or else the symptoms produced by it are erroneously interpreted as dependent on the initial malady. The second group, which is equally, if not more, important, consists of the instances where the latent disease is not detected until complications have developed, the original latent malady being overlooked, either owing to the complete absence of symptoms or in some instances owing to their equivocal character.

Both of these groups are of great practical importance from the clinical point of view and although the immediate object of this address deals rather with the second group it will be convenient to consider shortly some characteristic illustrations of latent diseases occurring as complications of other maladies and producing no obvious symptoms. As an example of this the renal sequelæ occurring in diseases of the bladder and of other pelvic organs may be quoted. Both the mechanical and the septic complications affecting the kidneys in bladder and pelvic disease may be readily overlooked. A very considerable degree of hydronephrosis, even bilateral in its distribution, may be present as a result of obstruction without producing any more marked effects than a diminution in the specific gravity of the urine and an increase in the amount of urine passed. Pyelonephritis may also exist with little other change in the urine than the presence of a trace of albumin, together with the excretion of an increased quantity of urine of low specific gravity and slight evening pyrexia. The existence of either of these renal complications is a factor which has a profound influence on the prognosis of the underlying disease and also on the likelihood of the success or otherwise of even very simple operative procedures. These renal complications will serve as an illustration of a truly latent disease, often reaching a high degree of development without the production of any symptoms sufficiently important to attract the patient's notice.

Another malady of a widely different character, but which may be truly latent, is the well-known occurrence of latent cerebral abscess as a complication of ear disease. In such cases headache, vomiting, and other characteristic features of the malady may be completely absent and such patients may die with great suddenness from rupture of the abscess into the cerebral ventricles. This fatal event is not uncommon where there has been little reason for thinking that the patient was suffering from any grave disease. In many, but probably not in all, such cases the error of overlooking the existence of cerebral abscess may be avoided by a careful examination of the optic discs, as it is well known that a considerable degree of neuritis may be present without producing such an impairment of vision as to attract the notice of the patient.

Pericarditis is especially apt to run a latent course when it occurs as a complication of renal disease, especially of Bright's disease. In such instances there is often a further reason for the pericarditis being overlooked owing to the fact that pericarditis is frequently not the only complication present; uræmia in one or other of its many forms may coexist with it. It is exceptional for the latent pericarditis of renal disease to be unaccompanied by physical signs, although the characteristic pain and many of the other usual symptoms of pericarditis may be absent. A careful physical examination will usually reveal the existence of the complication, especially if we bear in mind the great frequency with which it occurs both as a complication of renal disease and as an accompaniment of uræmia, and hence examine our patients thoroughly.

Many other instances might be quoted of the occurrence of serious and sometimes fatal complications of gross organic disease with more or less complete absence of symptoms, but the above will suffice for our purpose.

In other cases serious complications occur which are overlooked owing to the symptoms produced being attributed not to the complication but to the underlying malady. One of the most important and striking e afforded by the occurrence of so-calle effusion in cases of valvular disease of the especially, perhaps, in cases of aortic regu latent pleural effusion of this type may dev siderable extent without producing any symptom attracting notice to the pleural ca in most cases no other effect than a gra dyspnœa is to be observed, and this d absence of a complete examination of the readily be attributed to the cardiac malady causes when it is of mechanical and re Strychnia has often been prescribed in lar relief of the dyspnœa of valvular disease w remedy was paracentesis thoracis. Another latent pleural effusion is extraordinarily li looked depends on the fact that it not inf without the occurrence of marked genera much stress cannot really be laid on the i all cases of cardiac dyspnœa of a careful e made to determine the presence or absence effusion.

Although latent diseases are often overlo occur as complications of declared maladies, group of cases described above where the *ab initio* is by far the more important from of view, as many of our most serious mistak and prognosis are made by overlooking such some instances, no doubt, it is impossibl diagnose but even to suspect the existen organic lesion and such cases are only re post-mortem room. Not infrequently, howev can be made, or, at any rate, a suspicion en the disease which is apparently acute is complication, development, or sudden ma previously existent latent malady. Instanc can be quoted from almost all varieties of propose in the remaining time only to deal w more striking illustrations.

Amongst acute specific maladies typhoid f that affords the most striking as well as the illustration of this tendency to run a laten clinicians are aware of cases of apparently forative peritonitis which are really cases of a typhoid ulcer where the typhoid a latent course or, at any rate, has produce symptoms. Many such a case is erroneo as a case of perforative peritonitis due to It is of great importance in all cases of forative peritonitis to cross-examine the pati order to determine whether symptoms of are really absent or, as is more often the they have been present, but of an equiv character. Whether rheumatic fever ever run course is perhaps open to question, but many where extensive cardiac lesions are present definite history can be obtained of any p affection of the joints. Somewhat similar seen also in the cases of the complications of di scarlet fever. Typical diphtheritic paralysis, degree of severity, is familiar to everyone as sionally where no definite history of a throat obtained. In the case of nephritis and Bright possibility of a more or less latent attack of often a consideration that is forced on us. It in the case of chronic rather than in that of that the most striking examples of the exist diseases are afforded to us. The morbid proc at the root of angina pectoris very commonly very high degree without the production of and it is well known that the first attack of may be fatal. Fatty degeneration of the he in its more severe forms, is also a malady w a strictly latent course and the same is und of aneurysms limited to the first part of sometimes in others involving the thoracic seen an instance of a large aneurysm of aorta which produced no symptoms of any it had eroded the bodies of four dorsal vert caused paraplegia. The fact that fatty degen heart is peculiarly apt to run a latent course i considerable practical importance owing difficulty hitherto experienced not only in d disease but also in excluding it. Latent fat

r as an accompaniment or complication of many
ell as being the sole morbid process present
lead to sudden death in patients who are
very seriously ill, as in some forms of alcoholic
lso in some cases of hepatic cirrhosis. I have
nt with hepatic cirrhosis to die suddenly from
ere there was no evidence of the patient being
nd where cardiac symptoms were conspicuously
same fatality may occur in cases of alcoholic
at in both these maladies the possibility of the
latent fatty heart must be considered. Some
serious and fatal of cardiac diseases are
a latent course and this is a fact of capital
n the diagnosis of these maladies.

lmonary affections latent maladies are not so
one that is most liable to occur and to be over-
ink, pleural effusion. Latent pleural effusion
ss, a malady that is very generally recognised
t by some authorities is supposed to be more
ociated with pulmonary tuberculosis than other
urisy. It is also well known that the effects
roduced by a latent pleural effusion are sometimes
nay first attract notice to underlying malignant
e lung or pleura. Phthisis is not very apt to
latent course, although we are all familiar with
ere the most extensive phthisical changes may
d *without* the presence of very marked and
ptoms. It is usual, however, in such cases for
have been present, but either to have been
r erroneously attributed to some other non-
affection.

rkable that peritonitis may not only exist as a
e but that the most severe and violent forms
s may sometimes be present without producing
symptoms. I have known of a patient with
uodenal ulcer who was suffering from general
ritonitis who repudiated any idea of being ill
lking about within a few hours of his death.
eason that led him to seek advice was some
passing urine, yet there was general peritonitis
lomen contained a large quantity of offensive
cases where peritonitis runs a latent course the
most likely to be present is the purulent one,
instance just quoted the peritonitis was not only
the abdomen contained a very large quantity of
It has been suggested by some writers that in
purative peritonitis the inflammatory process is
hat the nerve endings are rapidly destroyed or
ncy impaired and hence the painlessness of the

e commonest diseases to run a latent course is
t and even if, strictly speaking, symptoms are not
absent, yet in a large proportion of cases they are
al and may not lead to the suspicion being enter-
e presence of a gastric ulcer. The *tendency of*
to run a latent course or, at any rate, one where
l symptoms attributed to ulcer are absent is of
ical importance for many reasons. In the first
y of these ulcers perforate and although in a
portion of cases the perforation is, so to say, a
et it is well known that perforation of a gastric
ulcer is one of the commonest causes of general
tonitis. It is a matter of considerable clinical
that the absence of any marked gastric symptoms
little value in excluding gastric ulcer as a cause
peritonitis. Another reason for bearing in mind
lity of the presence of gastric ulcer is the fact
so often associated with chlorosis, so that it is
certainty in any given case of
of the presence of gastric ulcer.
bearing in mind in gastric affec-
an ulcer being present without
symptoms depends on the fact
us diagnosis of gastric dilatation
de. I have known of an instance where laparo-
erformed with the idea of treating gastric dilata-
not only was an ulcer present which had not
cted, but where this ulcer was of such a size
ve nearly the whole of the posterior wall of the

t disease of the stomach, the colon, and the
y exist without producing any marked
ach a very high degree of development
any impairment of the general health.

It is true that this is exceptional, but its occurrence is sufficiently frequent for the fact to be borne in mind. Some years ago I saw a case of a man, aged 30 years, who came under observation for a slight enlargement of the umbilicus which was clearly of a malignant nature He presented no symptoms or physical signs of abdominal disease, but a few days afterwards succumbed to an attack of profuse hæmatemesis and a large primary carcinoma was present in the stomach. In this case the absence of symptoms was so complete that the patient refused to believe that there was anything seriously amiss with him and persisted in thinking that the induration of the umbilicus was dependent upon the irritation produced by a button. Profuse hæmorrhage may also be the first symptom produced by malignant disease of the rectum which may have reached a high degree of development without producing any local discomfort or any symptoms to attract notice. This is perhaps more especially the case where the disease occurs in elderly vigorous patients.

Many hepatic diseases are liable to run a latent course and in tropical countries this is not uncommonly the case with hepatic abscess. In this country, however, this is not a matter of any very great practical importance. Gall-stones probably produce no symptoms in the great majority of cases of their occurrence, and this is a point which must be always borne in mind in the diagnosis of the possible causes of jaundice. Although the mere presence of gall-stones does not in the majority of cases lead to symptoms, these are usually produced when there is any attempt at the passage of the stones. It is well known, however, that large stones may ulcerate through the gall-bladder into the intestine without the production of any symptoms indicative of obstruction of the bile-ducts. Hence in cases of intestinal obstruction from impaction of gall-stones a history of jaundice is not to be expected. Perhaps the most striking, and certainly the most common, instance of latent disease of the liver is afforded by cirrhosis in its many forms and especially perhaps by alcoholic or atrophic cirrhosis. It is well known that symptoms are not produced in this malady until the disease has advanced to a very great extent and, in fact, they ought to be called terminal symptoms owing to the period of the disease at which they are present. This is especially true of ascites and to a less extent of hæmatemesis, but it must be remembered that a high degree of hepatic *cirrhosis may exist for many years* and death may occur as an indirect result of some intercurrent illness. It is from this point of view that the recognition of the latent *course* that *hepatic cirrhosis* is apt to run is especially important. A patient may suffer from hepatic cirrhosis with no apparent ill effects for an unknown but prolonged period *and then as the sequel of an* attack of some intercurrent disease, such as influenza or typhoid fever (to quote instances which have fallen under my own observa-
symptoms dependent on
evelop and rapidly prove
's not occur during the
fatal.
height of the intercurrent affection but subsequently to it and during convalescence.

Another remarkable group of cases of rather uncertain nature is afforded by patients who come under observation suffering from acute general peritonitis apparently dependent on perforation, but where no perforation is found post mortem but a high degree of atrophic cirrhosis. Two such instances have fallen under my observation and both in
children where there was
health prior to the sudde
and the violence of this in
of appendicitis or some oth
No perforations were found at the post-mortem examinations, but on the other hand there was extensive hepatic cirrhosis together with acute general suppurative peritonitis.

Amongst cerebral affections, tumor cerebri, meningitis, and aneurysm of the large cerebral vessels all afford illustration of the existence of very grave organic disease without the production of symptoms. Aneurysm of the cerebral vessels is extraordinarily liable to produce no symptoms for a more or less prolonged period, in some instances not until the fatal rupture, and in other cases the
produced are so equivocal as to render recognition
sible. I have known of a
r artery where the initial
the persistence of this for a
irregularity of pulse and
retention of urine to be followed very shortly by the coma

dependent on the rupture of the aneurysm. The existence of tumor cerebri without the production of obvious symptoms is so well known that everyone appreciates the difficulty of excluding with certainty the presence of tumour.

In the case of meningitis we meet with a remarkable instance of the existence of a grave and fatal disease without the production in some instances of the characteristic features of the malady. This absence of symptoms may occur not only in the acute disease but also in the chronic form, or, to be more accurate, in the condition which may remain as a result of a former attack of acute meningitis. Instances are known of diffuse suppurative meningitis where the onset of symptoms ultimately has been so sudden as to suggest the occurrence of a vascular lesion or even such a condition as meningeal hæmorrhage and where, as a result either of operative interference or post-mortem observation, it is certain that the condition must have existed for a considerable time before the occurrence of the symptoms. Every physician is familiar with cases of meningitis where the absence of the characteristic features of the disease has led to an erroneous diagnosis of hysteria or even malingering. There is a rare form of meningitis, of which three instances have been seen by me, where the patient may recover from an acute illness characterised by headache, fever, retraction of the head, with vomiting and other symptoms suggesting the presence of meningitis. Nothwithstanding their recovery and the more or less complete absence of symptoms such patients die suddenly after a variable interval of apparent recovery of health. In one instance such a patient presented occasional vomiting but otherwise seemed perfectly well and was up and about. The post-mortem examinations in all these three cases showed thickening and opacity of the membranes at the base and distension of the fourth ventricle. None of them were really diagnosed, although in one the condition was suspected on account of the history of the acute illness and owing to the presence of some optic neuritis. These cases illustrate the manner in which the effects produced by the acute meningitis may lead to a condition that is rapidly fatal although not productive of marked symptoms.

Many diseases of the spinal cord, meninges, and even of the spinal column may not only exist but may reach a very high degree of development without the production of any characteristic symptoms. Thus a perforating ulcer or Charcot's joint may be the first evidence of the existence of such a chronic disease as tabes or syringomyelus, and fracture of the spine as the result of a sudden movement may be the first unequivocal evidence of the existence of sarcoma or other malignant disease of the bones. Again, the apparently sudden formation of a large psoas abscess may be the first indication of spinal caries, and in this malady it is not uncommon for paraplegia, or rather weakness of the legs, to be an early symptom of primary mischief in the bones.

Diseases of the kidneys afford perhaps the most striking instances of the existence of grave organic lesions without the presence necessarily of marked and obvious symptoms. We have already seen that diseases of these organs may occur in an insidious manner as consequences or sequels of pelvic diseases without affording sufficient symptoms to attract attention. Kidney diseases afford perhaps also the most frequent examples of the diseases grouped under the second heading of this address—viz, those where the original malady is overlooked until the occurrence of complications. Almost all the common affections of the kidney may exist in a latent form and advance to a high degree without producing marked symptoms. This is not only seen in such affections as hydronephrosis and pyelonephritis, but also in cystic disease, and most important of all in granular kidney and in certain forms of Bright's disease The recognition of what may for shortness be called latent Bright's disease and latent granular kidney is of great practical importance owing to the beneficial effects that may be obtained as a result of the proper treatment of these diseases.

The occurrence of bilateral cystic disease without the development of marked symptoms is more a matter of theoretical interest than of great practical importance inasmuch as so little can be done for the disease when recognised. It is not uncommon for patients to come under observation on account of vague abdominal symptoms or for such a symptom as gradually increasing constipation and then on examination of the abdomen for the presence of cystic disease of the kidneys to be revealed, and in such instances the large size of the renal tumours indicates that the malady must have for a very considerable time. In other instances, as known, extensive and bilateral cystic disease symptoms of any kind and is discovered, so to say, dentally where not suspected in the post-mortem Uræmia in one of its many forms, and even in its most form, may be the first intimation of the existence of disease of the kidneys. The affection usually d granular kidney is also one that is constantly under our observation in a more or less latent form this is the case both where the renal affection part and parcel of a widespread arterial d and also in other instances where the main of the pathological process is on the kidney No doubt in the large majority of both classes of patients careful cross-examination may elicit some of ill-health prior to the development of the that compels the patient to seek advice, but in a great cases such symptoms are elicited with difficulty and after the development of the complication. It is not un for these symptoms to be of a vague character, such failure in the general health and strength or possibly impairment of the general nutrition, symptoms which be due to a great variety of causes and which do not at sight suggest a possible renal origin. A common com tion that leads to the recognition of the underlying ma is cerebral hæmorrhage, but in these cases the cer hæmorrhage is usually profuse and often fatal, and t fore the recognition of the underlying cause is of no ava

In another and perhaps more striking group of cas symptoms of sufficient importance to attract attentio the part of the patient may occur until the onset of epi form seizures or some other manifestations of uræ Numerous instances have occurred where patients died from acute uræmia after an illness lasting in some c a few hours and in others only a few days. It is alwa worth while to examine carefully for the presence of granular kidney in cases of sudden epileptiform seiz occurring for the first time in a patient of the age li to granular kidney I would especially draw your att tion to the fact that one of the most fatal forms chronic Bright's disease not uncommonly runs what is all intents and purposes a latent course, no sympto being produced until the terminal or fatal illness wh may last but a few days. This form of Bright's dise is most commonly seen in young adults and is char terised post mortem by the presence of small wh or mottled kidneys with a rough granular surface. Th patients in my experience do not present, as a rule, a history of a definite attack of acute Bright's disease char terised by dropsy and they are often quite unable to give a information by means of which the onset of the disease c be ascertained, although doubtless in some instances it i sequel of a former attack of acute Bright's disease, but I not think that it is so in all for the reason just mention A very considerable proportion of these cases do not co under observation until a fatal complication is present a this complication is especially likely to be uræmia. In so instances one of the so-called uræmic skin eruptions has b the first symptom that has attracted notice. In others first symptom has been failure of vision owing to the devel ment of retinal hæmorrhages and marked optic neuritis, in others some inflammatory complication has superven more especially pericarditis. But uræmia in all its fo is unquestionably the most important and, I think, most common complication. Thus a patient may be s suffering from what is apparently an epileptiform seizure perhaps presenting no very marked signs of ill-health, onset of the fits having been quite sudden. Yet on exam tion the presence of marked arterial changes albuminuric retinitis and the secretion of a copious di urine containing a large quantity of albumin all p to the conclusion that the disease is not only la but has really existed for some considerable time, o for years. In the great majority of these pati it would not be correct to state that all symp are absent; there is often some progressive failure health and strength, but even this in some cases is marked and I have known the disease to be fatal uræmic complications occurring at a time when the aspect of the patient would by no means suggest the bility of the presence of a grave renal disease. Thus, a man, 25 years of age, presenting no history of a former illness, came under observation on account of neuras oms associated with, and apparently due to, business s. A few days afterwards a papular eruption appeared r the skin of the trunk and examination of the urine that it was of low specific gravity, abundant in ty, and contained a large amount of albumin, notanding

were no

uræmia

n 48 hours. This form of Bright's disease may very be overlooked unless the urine be examined in a fashion. The state of the optic discs will also often evidence of the existence of the malady, as it is le that where it has existed for any length of time s both in the retina and in the retinal vessels can be d. One of the reasons leading to the malady being oked is perhaps the fact that dropsy is not a marked and may even be entirely absent and, according experience, this is generally the case. The state of art and of the vessels will often raise a suspicion of esence of this form of chronic Bright's disease, but

be detected by the finger are

iac hypertrophy may unques-

t. The other form of chronic

large white kidney, is not so

run a latent course and owing to the anæmia pro- and the frequency of dropsy the recognition of the y is easy.

onclusion, the great lesson that is to be learnt from ccurrence of all these numerous varieties of latent e is the one that most of them can be detected or at ate suspected as the result of a complete physical nation. In other words, it is the symptoms that are , not the physical signs. The only precaution that it ssary to take is to examine as far as possible all the of the body and not to be contented with a physical nation restricted to those parts to which the patients ttention. Thus many a patient complaining of heart oms perhaps dependent on organic disease of the is really suffering from renal disease with secondary difficulties; the real cause of the disease would be etely overlooked if the examination were confined to gan to which the patient's symptoms are referred.

The Goulstonian Lectures

ON

EORIES OF IMMUNITY AND THEIR CLINICAL APPLICATION.

ered before the Royal College of Physicians of London on March 17th, 19th, and 24th, 1903,

A. S. F. GRÜNBAUM, M.D. CANTAB.,
F.R.C.P. LOND., &c.,

H IN UNIVERSITY COLLEGE AND THE
ASSISTANT PHYSICIAN TO THE
ONSUMPTION AND DISEASES
LECTURER AT THE LIVER-
MEDICINE, ETC.

LECTURE III.[1]

Delivered on March 24th.

NS, OTHER THAN ANTITOXIC AND BACTERICIDAL, OF CURATIVE SERA.

PRESIDENT AND GENTLEMEN,—We have seen that ntroduction of the serum of one animal into the of another, especially of a different species, leads formation of antidotes to that particular kind of In some instances, indeed, the serum of one animal e toxic for another. The introduction, therefore, of a ty of horse's serum into the human body may not be— , is not—always a matter of indifference. We know the case of diphtheria antitoxin a certain percentage es have eruptions, pains of the joints, &c., which obably to be assigned to the alien serum. Perhaps the juvenile serum is of

rimitive nature than the adult,

and prophylactic injections of

than those already grown up.

sera these side-issues do not

Nor will any harm arise from

a dose beyond what is necessary for mere neutralisation of the toxin; on the contrary, the excess may dissociate a union of toxin and cell already completed. There is not at present any evidence to show that the toxin formed by the bacillus diphtheriæ in the human body is not efficiently neutralised by the antitoxin formed in the horse's tissues.

With bactericidal sera the case is rather different, because for their efficient action both amboceptor and complement are required. It is obvious that efficiency will be attained only if both components are present in sufficient quantity, but it is the number of amboceptors resulting from the process of immunisation which will determine to a large extent the potency of the bactericidal serum, since they are present in normal blood only in small quantity. The complement, as we know, is much more unstable and may, on keeping of the bactericidal serum, either disappear or be converted into complementoid. On the other hand, complement is present in quantity and variety in normal serum, so that the introduction of amboceptors alone in the bactericidal serum will often suffice for its efficient action. But the quantitative relations of amboceptor and complement are of extreme importance. It has been known for some time that a medium dose of a bactericidal serum may save an animal from a lethal infection whilst a larger or smaller quantity fails to do so. The explanation seems to be as follows: If the two components are present in corresponding quantities the amboceptor will unite with the bacterium by its haptophore group, the complement will then fit into the complementophile group of the amboceptor and the bacterium will be destroyed. But with an excess of amboceptors an alteration of equilibrium takes place and the affinity of the complementophile group of the engaged amboceptor for the complement may be altered. If increased there is no harm done, because the complements will unite with the already engaged—viz., effective—amboceptors. If the affinity remains equal the complements will be equally distributed and only half will take part in the bactericidal action and the efficiency of the serum will be correspondingly reduced. If the affinity is diminished the result will be even more unfavourable, for then the complements will become first attached to all the unengaged amboceptors and only the remainder will be available for effective bactericidal action. Consequently in certain circumstances too much bactericidal serum may do more harm than good. Even if sufficient complement be introduced with the bactericidal serum it may lead to the formation of anti-complement and so, although a suitable complement as such will usually be present in the immune serum used for curative purposes, it may become engaged with the anti-complement and so be rendered useless. On the other hand, in active immunisation, although so far as we know there is no increased production of complement, that already existing in the organism will fit and activate the amboceptors formed during the immunising process.

To give a concrete example. Pigeons infected with vibrio Metchnikovi cannot be saved by the injection of the inactivated (heated) serum of rabbits immunised against the vibrio, unless some fresh rabbit's serum (containing complement) be added. The pigeon's blood possesses no suitable complement for the rabbit's amboceptors. On the other hand, by active immunisation of pigeons with dead culture of vibrio Metchnikovi they are soon rendered able to stand a multiple of the lethal dose, so that their blood must contain a suitable complement for their own amboceptors. For these reasons the treatment of enterica by weak immunisation with dead culture (Petruschky) may sometimes be more effectual, even after infection, than a bactericidal serum, or, perhaps, in spite of apparent theoretical objections, a combination of modes of treatment may be useful.

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in man, or at least a bacteriolysin the amboceptor of which finds in human serum an appropriate complement. The latter condition will be the more readily fulfilled the nearer the species employed in the immunisation process is to man. Perhaps the non-success which as yet has attended the employment of typhoid and cholera serum will be converted identity of the precipitins formed in each case. In spite of this close relationship attempts to produce diseases like scarlet fever and measles have failed. It is true that on one occasion after swabbing out the throat with a swab from the throat of a case of scarlet fever an exudative tonsillitis resulted and from the chimpanzee's throat the so called streptococcus scarlatinæ was isolated, but I do not think that the chimpanzee had scarlet fever. Apparently the chimpanzee's cells do not possess receptors for the poison of scarlet fever or measles.

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[1] tures I. and II. were published in THE LANCET of March 21st and March 28th (p. 853), 1903, respectively.

Certain acquired habits are known to predispose towards disease—e.g., alcoholism to phthisis. Have we any material evidence to show in what the predisposition consists? The experiments of Abbott and Bergey have shown that the administration to rabbits of alcohol diminishes the serum complement of the blood, while others have shown that it renders the rabbits more susceptible to infection by pathogenic organisms. In the case of man, diminution in the amount of serum complement in the last stages of disease has been shown on several occasions and affords an explanation of terminal infections.

There may be an underlying current of rationalism in the practice of periodical venesection in times gone by. The abstraction of protective bodies ought in the healthy organism to stimulate their reproduction and their overproduction. In some animals there seems to be a seasonal variation in the bactericidal power of the blood; who knows but this may be so in man too, and that by instinct our forefathers may have fallen on the most appropriate season? The question admits of experimental solution and a comparatively simple investigation would give the answer.

This line of thought suggests another mode of treatment based on Ehrlich's theory. Since infection is not possible in the absence of suitable receptors it might be feasible to devise some means of destroying these particular receptors. The method in our present state of knowledge would not be free from danger, for we might unwittingly destroy also nutritive receptors and do more damage than good to the patient. Perhaps it will form a part of the therapy of the future.

An organ has sometimes to protect itself against the action of a part of itself. We have already seen that bacteria are not digested in the alimentary canal and it is a familiar fact that ascarides can survive the digestive juices and it has recently been shown that the body wall of ascaris contains an anti-enzyme to pepsin. But what is more important and interesting is the fact that the human stomach wall contains an anti-enzyme to its own ferment. It is an obvious deduction to infer that a diminution in quantity of this anti-pepsin may have an ætiological relation to gastric ulcer. By the production of an anti-antipeptic serum an experimental verification of this inference would be possible.

SERUM DIAGNOSIS.

The existence of the agglutinins was one of the earliest results of modern investigations into immunity. They form a valuable means of identifying bacterial species and recognising the degree of relationship between various species, whilst they have also been employed practically as a diagnostic sign in disease.[2] So much has been written and said about them in the past seven years that it is hardly necessary to enter into a detailed description of their characters and production. I may mention, in passing, that the most recent work shows their probable identity with the precipitins but not with the amboceptors, since a serum can be produced, after suitable treatment, by the bacillus pyocyaneus which possesses immunising but not agglutinating properties.

But in the practical application of serum diagnosis various phenomena may occur which must be known and understood in estimating the value of the results. In spite of early warnings, some at once pinned their faith on the supposed infallibility of the test and then, finding that it was unable always to determine an uncertain diagnosis, became unbelievers. The agglutinins, although not identical with the amboceptors, nevertheless go roughly together with them in their rate and conditions of production in ordinary circumstances. Consequently in very severe infections, when all the cells are hard hit and many of them succumb, the agglutinin may either be used up or not formed, so that it is but natural for the reaction to be feeble or absent until the patient is already on the road to recovery. On the other hand, in mild attacks, which may be the result of either milder infections or of greater resistance, the reaction may naturally appear sooner and be stronger. Or, again, its absence may be due to an error in diagnosis. Finally, it may be the result of faulty technique.

The following points are worthy of consideration. Agglutinins may become converted into agglutinoids. These would in this form also unite with the bacilli like the complementoids with the amboceptors, but without producing any specific effect; no agglutination would take place. The bacilli may lose their agglutinability, although retaining the power of uniting with the agglutinin—viz., their agglutinable substance loses its functional atom-group. This group is comparatively unstable, so that unsuitable culture media, &c., may make the bacilli non-agglutinable, although uniting with the agglutinin. If the serum contain both agglutinins and agglutinoids and the latter have the greater affinity for the bacteria, even if present in less quantity, they may inhibit agglutination until the serum is so far diluted as to give the agglutinins a greater chance. This explains an early observation of my own for which I was then quite unable to account—that a higher dilution would sometimes agglutinate when a lower one would not.

The agglutinable substance is partly soluble in NaCl solution, so that an emulsion of bacilli should always be made fresh or the reaction becomes less sensitive

PARTIAL AGGLUTININS.

This expression is used to indicate the fact that several agglutinins may exist in a serum and may have slightly different cytophile groups, so that they will react differently as regards intensity with different strains of the same bacillus. Some may even act on nearly allied bacilli. Consequently it is a matter of importance what culture is used for serum diagnosis. It is also important in using an agglutinative serum both for the identification of a bacillus and for a serum diagnosis that the serum should be diluted as much as possible consistent with obvious action, since in this way the misleading action of the less numerous agglutinins is eliminated.

The serum reaction is also likely to be absent in cases of erroneous diagnosis. If bacteria are otherwise nearly allied it is, at any rate, possible that they may produce symptoms having much clinical resemblance. This seems to be so in typho-coloid fever on the other hand. The relationship between the bacteria may be so close that the patient's serum may act on each in comparatively low dilutions and the various strains may be separable only by degrees of dilution. Of course, discretion and reason must be exercised in all these cases, so that serum diagnosis requires not only considerable technical knowledge and skill but also an acquaintance with the clinical features of the case under investigation. It is only a symptom and its value as such in any particular case will vary like the value of any other symptom.

There is a strange gap in our knowledge of ætiology regarding those diseases of which one attack produces a very lasting immunity; of small-pox, typhus fever, scarlet fever, measles, and others we do not know the morbific germ. It is a curious coincidence that these diseases happen to be the most infectious. I believe that the discovery of their causes would throw great light on the phenomena of immunity. Even with our present knowledge I think we can assert that they are cases of mixed infection in which streptococci play a part, but only the minor part, as often in tubercle and diphtheria. Streptococcus scarlatinæ seems to occur pretty constantly in the throat and in the blood of scarlet fever patients. In two cases of measles I have found in the heart blood at the necropsy a streptococcus which is always present in the throats of patients suffering from measles. But to my mind it is pretty certain that these are only accessory causes. For we know that immunity to streptococcal infection is short and that second attacks are common. Many people exposed to scarlet fever infection get sore-throats repeatedly but not scarlet fever, and streptococcus scarlatinæ has been isolated from such cases.

The infectious fevers form an attractive theme for theorising and a yet more attractive objective for investigation. Their infectivity does not seem to be all of one [illegible] Thus yellow fever, an attack of w[illegible] confers immunity, has until quite recently [illegible] as infectious. Yet the infection is certainly not by contagion; it is transmitted by the mosquito. The pathogenic micro-organism has not yet been found. Can it be that the infectious diseases of temperate climates are transmitted in a similar fashion? It seems possible, but unlikely.

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[2] First performed by myself on March 14th, 1896 and first mentioned by Gruber at the Wiesbaden Congress in April, 1896. The first publication, by Widal, was on June 26th, 1896, but he has not consented to give the date on which he performed his first serum diagnosis, so that it is presumably after mine, and after Gruber's utterance.

Even so, we are not any nearer either the cause of the disease or the reason for the long immunity. But I believe that the discoverer of the cause will find with it the key to *the innermost temple of the Theory of Immunity.*

FURTHER OBSERVATIONS ON THE TREATMENT OF SMALL-POX BY THE SERUM OF IMMUNISED HEIFERS.

BY R. S. THOMSON, M.D., D.SC., F.F.P.S. GLASG., F.R.S. EDIN.,
PROFESSOR OF MEDICINE IN ANDERSON'S COLLEGE MEDICAL SCHOOL AND VISITING PHYSICIAN TO THE CITY OF GLASGOW SMALL-POX HOSPITAL, BELVIDERE;

AND

JOHN BROWNLEE, M.A., M.D. GLASG., D.P.H. CAMB.,
PHYSICIAN SUPERINTENDENT TO THE CITY OF GLASGOW FEVER AND SMALL-POX HOSPITALS, BELVIDERE.

IN 1897 some observations on the treatment of small-pox by the subcutaneous injection of serum obtained from heifers immune to vaccinia were reported.[1] None of the cases were seemingly in any way affected by the treatment and it was suggested in that communication that possibly the administration of larger doses might be attended with more satisfactory results.[2] The presence of small-pox in Glasgow during the past two years has afforded an opportunity for a renewal of these observations and we propose to publish an account of 13 cases in which large doses of serum were administered.

The serum was obtained, through the courtesy of Messrs. Parke, Davis, and Co., from the vaccine establishment of that firm in Detroit and it was provided in bottles each containing 16 ounces. It was not concentrated or interfered with in any way except that tricresol had been added at the time of bottling in the proportion of 0·4 per cent. The sterilisation of this serum w[illegible] for some was kept in the City [illegible] at Belvidere for nine months [illegible] of decomposition, as proved [illegible] culture media inoculated w[illegible] administered by means of a metal syringe holding two ounces and were delivered into the subcutaneous tissues, generally in the axillary region. The dose varied to some extent with the age of the patient, but in adults the average amount given was 30 ounces of serum. Usually 16 ounces were injected as soon as possible after the patient was admitted and in most cases a like amount some hours later.

The cases selected for treatment were mostly of the severest type, the object being to avoid as far as possible the fallacy which arises from the modified course followed by small-pox in vaccinated persons who still retain a certain degree of insusceptibility. Had circumstances permitted only unvaccinated persons would have been selected, but as the number of these was small and the supply of serum limited it was thought better to treat severe cases as admitted, although vaccinated in childhood. Another circumstance which limited the number of suitable cases was the importance of using the serum only when the patient was admitted during the early period of the eruption—that is to say, as soon as the nature of the disease could be recognised with certainty. Of the 13 cases chosen 12 were undoubtedly small-pox, while the thirteenth, as will be seen later, was presumably not a case of small-pox, though its exact nature cannot be defined. Of the small-pox cases three were hæmorrhagic, four presented a confluent eruption on the face, while in five the eruption was very abundant but discrete. Five of the patients died.

It has been thought advisable to give a somewhat detailed report of the course of each case, so that the whole evidence upon which the conclusions are based shall be brought under the notice of the reader. For convenience the cases are arranged in three groups—the hæmorrhagic cases, the confluent cases, and those cases in which the eruption on the face was very abundant but discrete.

HÆMORRHAGIC CASES.

CASE 1.—A man, aged 35 years, was admitted into the City of Glasgow Small-pox Hospital at Belvidere on May 23rd, 1901, when the temperature was 102° F., the pulse was 65, and the respirations were 22 per minute. There was one primary, non-foveated, and glazed vaccination scar on the right arm measuring 0·27 square inch in area. The present illness began on the 20th with headache, backache, and general febrile symptoms. The eruption was first noticed on the 22nd. On admission three varieties of eruption were observed: (1) a sparse papular rash on the face, the arms, the trunk, and the legs, of fairly equal distribution; (2) a "petechioid" prodromal eruption over the groins and inner sides of the thighs extending over the flanks towards the axillæ; and (3) a hæmorrhagic [illegible] few true petechiæ distributed on [illegible] thigh in the trochanteric region, [illegible] hæmorrhage was present on the outer side of the right leg above the ankle. A few other hæmorrhages of a small size were found on the inner aspect of the left thigh. No petechiæ were seen on the face, arms, or trunk. The patient stated that he had spit a little blood on the day prior to admission and this hæmoptysis still continued. The physiognomy so frequently seen in cases of hæmorrhagic small-pox was present, the pupils were contracted, and the conjunctivæ were suffused, and a dusky flush was present on the face. The pulse was slow, regular, and full, and numbered 65 per minute. There was no complication in the internal organs.

The administration of serum was begun at 4 P.M. on the day of admission. 30 ounces were injected into the tissues of the right axillary region in two portions of 15 ounces each with an interval of two hours between the doses. The patient did not feel any discomfort or pain during the progress of the injection. Immediately thereafter the temperature was 101°, the pulse was 76, and the respirations were 30 per minute but the temperature rose steadily till at midnight it registered 104°. At this time the pulse was 94 per minute. Absorption of the serum was still incomplete 18 hours after the injection, a fluctuating swelling being present in the right axillary region. There was no sign of local reaction around the seat of puncture. No fresh petechiæ had developed, but the "petechioid" eruption in the groins and round the flanks was more decided. The urine contained a trace of albumin but no blood. During the day the patient had some hæmoptysis. On the 25th the temperature continued between 103° and 105° in spite of frequent cold sponging, the latter temperature being registered at 3 A.M. The pulse-rate varied between 100 and 120, but the rhythm was regular although the tension was low. The papular eruption had developed greatly and was fairly profuse on the face, the arms, and the back. On the back, and to a less extent on the arms, hæmorrhage had taken place into the bases of the papules. There was a fairly profuse petechial eruption most marked over the flanks and groins, but scattered petechiæ were also present on the abdomen and back. Around the puncture through which the serum had been injected a purplish-black area had appeared, circular in shape, with a diameter of five inches, and extending up into the axilla. No blood was expectorated on this day. The urine still contained some albumin, but no blood was detected in it or in the motions, although the bowels had been freely moved by medicine. Towards evening the patient became slightly delirious but answered questions intelligently, and as midnight approached the temperature rose to 106°, but fell during the night till at noon of the 26th it was 102·8°. The true small-pox eruption had now become vesicular and the petechial rash was more pronounced. The hæmorrhagic area round the puncture had slightly increased in size and become indurated. The pulse continued good with a rate of from 100 to 120 per minute. On the 27th there was no distinct change noted in the patient's condition, the temperature remaining between

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[1] Scottish Medical and Surgical Journal, August, 1897.

[2] It was only after the publication of the above paper that the authors became aware of the experiments of M. A. Béclère, in which large doses of serum were employed in the treatment of small pox. (Note sur la Sérum thérapie de la Variole, par M. A. Béclère, Nancy, 1897.

102° and 104°, but the pulse was now much weaker and sometimes ran into a mere thread. On this morning a little blood was detected in the urine for the first time. The patch of hæmorrhage around the puncture was larger. On the 28th the eruption had become fully vesicular and the temperature continued high, but the pulse was of better tension and numbered 102. There was again a trace of blood in the urine. On the 29th the pulse had become very irregular. Subsultus was present. The temperature rose steadily from 101° in the early morning and reached 105° at noon. During the following nine hours it fluctuated slightly and was 103° at 9 P.M.; thereafter it rose to 106 4°, which it reached on the morning of the 30th, when the patient *died.*

CASE 2.—A woman, aged 40 years, was admitted into the hospital on June 30th, 1901, at 3 45 P.M. on the fifth day of her illness. The attack had been ushered in by the usual febrile symptoms, among which headache, pain in the back, and vomiting were the most prominent. The eruption had appeared on the 29th. On admission the temperature was 101° F., the pulse was 60, and the respirations were 34 per minute. The facial expression was that commonly seen in hæmorrhagic small-pox, the face being flushed and apathetic, the pupils contracted, and the eyes suffused. Under the ocular conjunctiva of the right eye there was a hæmorrhage of considerable size. The trunk and extremities presented a fading dusky scarlatiniform prodromal eruption, while a prodromal rash of "petechioid" spots was present in the groin and over the lower part of the abdomen. In addition to these several small true hæmorrhages were present over the lower part of the abdomen and on the legs. The true small-pox eruption was badly developed, but the forehead presented the characteristic velvety feeling sometimes noted when the early papular eruption is confluent. This eruption was scanty on the trunk and limbs. The pulse was small, soft, and slow. The patient had one primary, non-foveated, and glazed vaccination scar having an area of 0·27 square inch.

After admission the patient vomited persistently till 8 P.M., when an injection of 17 ounces of serum was administered hypodermically in the right axillary region. After the injection the vomiting continued. The vomited matter and the urine passed from the time of admission were free from blood, but the latter contained a trace of albumin. About 11 A.M. on the day after admission a second injection of serum was attempted, but as the patient began to vomit and showed signs of great uneasiness only nine ounces were administered. After the first injection the temperature fell slightly from 99·8° to 99°, at which it continued till 6 A.M. on July 1st, when it began to rise, reaching 100·4° at 9 A.M. After the second injection it continued to rise and reached its maximum of 102 6° at 3 P.M. The pulse seemed little, if at all, affected by the first injection, but about two hours later it increased in frequency and reached 108 immediately before death which took place at 8 P.M. on the day after admission. Prior to death the characteristic small-pox papules had become more numerous and a considerable eruption of small hæmorrhagic spots had appeared over the trunk and limbs, being especially abundant over the lower part of the abdomen and the inner side of the thighs

CASE 3.—A man, aged 20 years, was admitted into the hospital on May 11th, 1901, when he stated that he had been ill for three days. Though feeling a little out of sorts for some time before the onset of his illness it was only early on the 9th that his symptoms became really violent. An eruption appeared on the 10th. On admission the temperature was 104° F., the pulse was 124, and the respirations were 32 per minute. The patient complained of sore throat and was apparently very ill. The eruption consisted of a livid erythematous rash covering the whole trunk and extremities, while scattered over the skin were a considerable number of petechiæ rather more abundant on the chest and legs than elsewhere. The subconjunctival tissue was the seat of extensive hæmorrhage, so that the conjunctivæ were elevated beyond the corneal level. During the first few hours after admission the patient spat up a considerable quantity of blood and passed a motion which was almost black in colour from the presence of altered blood. There was very little true eruption on any part of the body. The throat was vividly congested and presented a number of papules. The patient presented two vaccination scars having a combined area of 0·9 square inch. These were not foveated and were slightly depressed but moderately well defined.

Between 11 P.M. and 1 A.M. on the following day 16 ounces of serum were injected into the connective tissue of abdominal wall. The injection did not seem to cause discomfort or pain. Immediately after the injection temperature fell, but rose again to 102°, at which it approximately till the patient's death at 2 P.M. on May Prior to death the appearance of the skin was very There was an almost entire absence of the variolous rash, the skin being of a deep dusky red set with very numerous hæmorrhages varying in size that of a pin's point to that of a split pea or greater.

Little can be said in criticism of the three cases. All were of the severest type of hæmorrhagic pox—a type which almost invariably ends fatally and where no known treatment seems to exercise any influence on issue. In the first case 32 ounces of serum were administered, in the second 26 ounces, and in the third 16 ounces. The longest course was that followed by Case 1, in which the true small-pox eruption reached well into the vesicular stage, so that apparently no modifying influence was exercised by the serum either upon the course of the true eruption or upon the hæmorrhagic condition. this case the seat of injection became the centre of a large ecchymotic spot which on examination post mortem was found to be the result of an extravasation of blood into the subcutaneous and muscular tissues of the pectoral region. Though the vaccination in this particular group of cases has little bearing upon the results of treatment it may be worth noting that all were vaccinated.

CONFLUENT CASES.

CASE 4.—A boy, aged 10 years, was admitted into the hospital on June 29th, 1901. The illness began on the [illegible] with headache, nausea, and vomiting. The eruption was first seen on the day of admission. The patient was said to have been vaccinated in infancy but no mark could be detected and consequently his vaccination must be regarded as *doubtful.* An unsuccessful attempt to vaccinate him had been made the day prior to admission. The temperature when first seen was 101·2° F. but rose shortly thereafter to 104°, when the pulse was 100 and the respirations were [illegible] per minute. There was an abundant eruption of early small-pox papules on the face, though elsewhere it was less abundant and was not so fully papular. There was also a faint macular erythema over the trunk and lower limbs. The internal organs were healthy on physical examination.

At 3 P.M. on the 29th six ounces of serum were injected into the right axillary region. The temperature rose thereafter and reached 105° at 9 P.M. On the 30th the patient received a second injection consisting of 12 ounces of serum at 11.15 A.M., after which the temperature fell to 99° at 3 P.M. but rose again to 103·6° at 6 P.M. During the night the eruption had developed and was now very abundant on the forehead and face, moderately so on the arms and legs, but scanty on the trunk. It was still papular. On the morning of July 1st the temperature was 99·2° but rose gradually during the day. The pulse was not so good. The bulk of the eruption continued papular but signs of vesiculation were observed here and there. On the 2nd the eruption had become vesicular and semi-confluent on the face which had swollen considerably, while it was still sparse on the trunk. The pulse had improved. From this date till that of the patient's death on the [illegible] the eruption passed through an uninterrupted and unmodified course of development, being fully pustular and septic at the time of death which took place on the thirteenth day of his illness. The temperature was somewhat irregular but showed on the whole an upward tendency, as is so commonly seen in cases of septic small-pox; coincidently the pulse-rate increased in frequency while the tension gradually fell. In this case there was no local reaction around the seat of puncture and no hæmorrhage occurred in the tissues into which the injection was made.

CASE 5.—A man, aged 37 years, was admitted into the hospital on Feb. 3rd, 1902, with a doubtful history. On admission the temperature was 102·8° F., the pulse was 114, and the respirations were 24 per minute. The eruption was very abundant over the whole body and was in an early papular stage. It promised to be confluent on the where its presence was associated with a consi amount of congestion. Over the rest of the body papules were arranged in somewhat corymbose the distribution of the patches being apparently by a cutaneous syphilitic eruption of a scaly The papules were abundant on the palms and soles.

fauces and palate were congested and were set with a very abundant rash which extended over the whole of the hard as well as the soft palate. There was one vaccination cicatrix measuring 0·37 square inch, which was non-foveated and ill defined.

Shortly after admission 16 ounces of serum were injected into the subcutaneous tissue of the right axilla and on the following morning a second dose of 16 ounces was injected into the left side. After the first injection the temperature fell to 99° but rose again on the evening of the following day, when it reached 101·9°. On this day the eruption had advanced considerably and was more abundant than on admission and the corymbose arrangement was more striking. The patient complained of no discomfort or pain resulting from the injection. All the serum had been absorbed and there was no evidence of a local reaction. The rash now became fully vesicular and pustulation was noticed on the face on the 9th. From this time onwards the usual course was followed by the eruption, though crusting began rather earlier over the syphilitic patches than on the surrounding skin. The eruption was septic. Throughout the patient's condition was regarded as unsatisfactory, but it became grave on the 12th, when some redness and induration were noticed over the right pectoral region. A patch of cellulitis was observed over the point of the left elbow also and another over the sacrum. The cellulitis over the right pectoral region was treated surgically, but the patient gradually sank and died on the 20th. Before death the temperature rose to 106° and the pulse to 152.

CASE 6.—A man, aged 22 years, was admitted into the hospital on Jan. 28th, 1901, on the fourth day of his illness. This commenced with pain in the head and back and general symptoms of fever. The rash appeared on the day of admission. On admission the temperature was 99·2° F., the pulse was 76, and the respirations were 26 per minute. The eruption was very abundant on the face, the back, the arms, and the thighs, and was in an early papular stage. On the scalp it was sparse and there was none below the knees or on the palms or soles. The fauces and palate were congested and thickly set with papules which extended forward as far as the teeth. Over the lower part of the back the remains of a prodromal erythema were visible. The pulse was small and easily compressible. The heart sounds were feeble.

At midnight 16 ounces of serum were injected subcutaneously and at 2.30 A.M. a second injection of a like amount was administered, but the temperature seemed little influenced. On the 29th the eruption was more abundant, having extended over the legs, the soles, and the palms. Indications of vesiculation were present in a few of the elements on the arms and buttocks. There were no indications of local reaction at the seat of puncture. From the 29th onwards the eruption over the face and trunk developed regularly and the elements which were small and irregular had become fully pustular by Feb. 2nd and on the following day began to dry in. The secondary fever was slight and ended on the tenth day of the illness.

CASE 7.—A woman, aged 36 years, was admitted into the hospital on May 15th, 1901. The history was somewhat indefinite, but it seemed clear that the eruption was first noticed on the 12th. The earlier symptoms consisted of headache, sickness, and those of general fever. The eruption over the face and the greater part of the body was in the early vesicular stage. On the face it was confluent and abundant and evenly distributed on other parts of the body. The temperature was 101° F. The vaccination was doubtful.

At 11 P.M. on the day of admission 16 ounces of serum were injected into the subcutaneous tissue of the right axilla. The temperature at the time of administration was 101° and this fell towards morning to 100°. In the morning the patient declared that she felt much better, but her pulse was somewhat rapid, being 124 per minute. The whole of the serum had been absorbed and there was no evidence of a local reaction. The eruption, which was more decidedly vesicular than on the previous day, felt very dry, as is so frequently the case with eruptions which ultimately run a modified course. It should be stated that this character of the eruption was present, though in a less degree, before the serum was administered. On the 17th there was commencing pustulation on the face and on the 19th the eruption in this situation was commencing to crust, while on other parts of the body pustules were still present. On the 20th the temperature fell to normal and did not rise again. Convalescence was uninterrupted.

In regard to this group of cases the following points may be noticed. In all the dose of serum administered was considerable. In two of them 32 ounces of serum were injected subcutaneously; in one, a boy, 18 ounces were given, while in the fourth case owing to the modified course followed by the eruption only 16 ounces were administered. There was no evidence of local reaction in any of the cases. In Case 5, however, it is open to discussion whether the cellulitis might not have resulted from the injection of the serum. In this connexion it should be observed that the case was exceedingly septic from the maturation of the pustules onwards; that the first patch of cellulitis commenced at some distance from the seat of puncture and made its first appearance on the tenth day after the serum had been injected and that a similar condition appeared a little later over the left elbow and over the sacrum—that is to say, a long distance from the first puncture; and, lastly, that the patient was the subject of late secondary syphilis.

As to the course followed by the confluent cases, as has been already said, two proved fatal, in one of which the vaccination was doubtful while in the other the area of vaccinal scarring measured 0·37 square inch. The former of these patients died on the thirteenth day of illness and the latter on the twenty-third and in both the eruption ran an unmodified course from begining to end. Of the two cases where recovery ensued, in one (Case 7) the vaccination was doubtful while in the other (Case 6) there were four scars with an aggregate area of 0·66 square inch, three-quarters of which was foveated, yet in spite of the apparent differences as regards vaccination both ran a somewhat similar course. In both cases desiccation commenced on the tenth day from the first appearance of symptoms and in both the temperature fell to normal with the first appearance of drying in. This course as seen in Case 6 is that commonly enough observed in persons suffering from small-pox who still enjoy a certain degree of protection derived from their original vaccination. The doubtful character of the vaccination, however, in Case 7 raises the question as to whether the modified course followed by the [illegible] been the result of the serum, [illegible] ceived only 16 ounces and that because on the day after the injection the dryness and general character of the eruption seemed to indicate that it was about to follow an abortive course, or, in other words, the physical conditions of the rash suggested that the patient possibly enjoyed a certain degree of immunity the result of vaccination performed in infancy of which no local evidence could be discovered. The abundance of the eruption on the arms during the acute stage of the attack and the changes in the skin present thereafter while the patient was under observation made the certain detection of vaccination scars of small size practically impossible.

CASES IN WHICH THE ERUPTION ON THE FACE WAS VERY ABUNDANT BUT DISCRETE

CASE 8.—A man, aged 48 years, was admitted into the hospital on Feb. 21st, 1902. His illness began on the 17th with general febrile symptoms, but of these none was especially prominent. The eruption was first noticed on the 20th. The patient's temperature on admission was 101·6° F., the pulse was 80, and the respirations were 24 per minute. There were two foveated vaccination scars on the left arm, with a combined area of 1·12 square inches and with well-defined margin [illegible] present on the [illegible] rash on the [illegible] was moderately abundant on the soles and the palms. This eruption had all the physical characters of an early papular small-pox rash which gave promise of becoming very abundant. The patient complained of soreness in the throat and this on examination proved to be congested and set with a number of small papules. There was nothing to be found in the internal organs on physical examination.

About four hours after admission the patient received an injection of 16 ounces of serum into the subcutaneous tissue of the left axilla and about an hour later a second injection of a similar amount was made into the left flank. After the injections the temperature fell and reached normal in the early morning. At this time an examination of the urine revealed the presence of a trace of albumin. During the following day the temperature rose and reached 102° at midnight, but towards morning it fell again to 99·8°. An examination of the sites of injection showed a little swelling in both situations with some pain and tenderness.

that if we are to judge by the alleged influence of immunising serum in preventing the full development of vaccination in susceptible animals, in both of these cases there was ample time for the manifestation of any such action which might be possessed by the serum to show itself.[3]

The other seven cases ran a more or less modified course, with the exception of one of the less severe cases in which the attack was practically unmodified, crusting commencing on the face on the twelfth day of illness. In this case the serum was administered on the ninth day before crusting commenced, so that there was presumably sufficient time for the immunising action of the serum to show itself. In the other patients the eruption ran a distinctly modified course, showing that some protective influence was present in each case, but whether this influence was furnished by a primary vaccination or by the injection of the immunising serum is not easy to say.

Of these six cases, five were undoubtedly vaccinated, while in one the vaccination was doubtful. In the former the area of vaccinal scar varied between 0·44 square inch and two square inches, but in only two was foveation present. The ages varied between 17 and 48 years. It is impossible to assess the precise degree of protection enjoyed by these patients as the result of their original vaccination, but the extent of the eruption and the date at which desiccation commenced showed that this was by no means great. It is likewise impossible to determine whether the less severe course followed by these cases and the rapid desiccation of the eruption, sometimes without crusting, are to be attributed to the action of the serum, but judging from he result of experiments upon the immunising action serum from vaccinated heifers when injected into eifers prior to vaccination it is probable that in ost of the cases under discussion the serum was dministered sufficiently early to influence the course the disease if it was capable of doing so. Some ght may be thrown upon this point by consideration f Case 13. In this case 19 ounces of serum were injected 3 hours, and an additional 12 ounces 24 hours, prior to accination, yet in spite of this large dose of immunising rum the revaccination was successful and ran the usual ourse. This observation is probably unique and shows that n amount of serum equal to 1 in 75 of the patient's weight as unable to bring about any change in the course commonly followed by revaccination. This patient almost certinly did not suffer from small-pox, and this opinion is ased upon the course followed by the eruption, which was uite unlike that seen even in the most modified cases of that disease, and in addition the patient was successfully revaccinated—a fact which is strongly in favour of the opinion just given, for though it is possible to vaccinate an individual during even the last day of the incubation period in some cases, and even during the prodromal stage, the local reaction being often marked and running quite a normal course, yet vaccination performed after the first appearance of the rash has, in the experience of the City of Glasgow Small-pox Hospital, invariably proved negative. In this connexion it may be stated that while during the past ten years about 250 persons have been vaccinated at various dates after the appearance of the eruption yet the operation proved unsuccessful in every case. In a few, papules of about the size of a small split-pea appeared having characters unlike those usually seen in the papule caused by vaccination. In others a slight reddening of the vaccinated area with increased prominence of the cutaneous papillæ resulted, but in the great majority no local reaction which could be ascribed to vaccination occurred, nor in any instance was there any suggestion of the development of a papule into a vesicle.

An analysis of the different cases cited here shows the following:—1. No action of any kind was observed in the hæmorrhagic cases treated with serum. In Cases 1 and 2 as the serum was administered only 24 hours before death there was probably too little time for it to exercise any influence; but in Case 3, where the patient died a week after the injection, there was probably sufficient time for the influence of an immunising agent to become apparent had the serum contained such a substance in sufficient amount. 2. In certain cases in which the serum was administered from eight to 18 days before death or commencing desiccation, no influence whatever seemed to be exercised upon the course of the disease, though in these there was ample time for the serum to act. 3. In the remaining six cases the serum was administered from four to seven days before desiccation commenced. In all of these the course was modified and there was probably sufficient time for the serum to exercise an immunising influence, but as all, with two exceptions, were undoubtedly vaccinated, and as these two were probably vaccinated, it is impossible to determine whether the modified course resulted from the primary vaccination or from the treatment. 4. Case 13 shows that the serum completely failed to modify the course of a revaccination. 5. It is possible that the eruption which appeared on the eighth day after the serum was administered may have been due to the presence in the serum of some agent identical with, or closely resembling, substances present in the blood of variolous patients. 6. That the serum in Case 13 did exercise some influence upon the tissues, though none so far as could be determined on the vaccination, is suggested by the development of the cutaneous erythema on the eighth day after the administration of serum was begun. Details of this eruption and of its distribution have already been given, but we may observe here that the characters and distribution were precisely those so frequently present in the erythematous and some other of the prodromal eruptions so *commonly found in variola and varicella and exceptionally* after vaccination. This suggests that some active body may be present in the serum in sufficient quantity to produce a distinct reaction in the absence of variola—that is to say, when the individual has not been immunised by passing through the earlier stage of small-pox against the toxins presumably present in the serum.

Though not directly bearing on the treatment of small-pox by serum it may not be out of place to add a few remarks regarding the special sequelæ which may attend the administration of large doses of serum in plague and in diphtheria. The prevalence of these diseases during the last few years has afforded exceptional opportunities for acquiring experience in the use of serum in large doses. During the last outbreak of plague in Glasgow some of the patients had as much as ten ounces of anti-plague serum administered either hypodermically or by the intravenous method, while in a number of cases of diphtheria where death seemed impending anti-diphtheritic serum to the amount of four ounces was given through the same channels. Anti-plague and anti-diphtheritic serum are both derived from the horse and their administration is frequently followed by a marked reaction in which fever with articular pains and cutaneous eruptions of an erythematous and urticarial character are prominent features. The severity of this reaction bears apparently no relationship to the amount administered, being often very severe where minimal doses are given and absent in many cases where the dose administered is large. The action of anti-variolous serum differs markedly from that just referred to, as it only once, in our experience, was followed by any reaction which could be directly attributed to it. This experience is in agreement with that of M. Béclère[4] who found that the serum of heifers is much less toxic when administered to man than that of horses, but the frequency with which, according to M. Béclère, cutaneous eruptions followed on the administration of anti-variolous serum is contrary to our experience—a fact which suggests that the serum used by us may possibly have contained fewer toxic substances than that employed by that observer.

Glasgow.

ETHYL CHLORIDE AS A GENERAL ANÆSTHETIC.

By W. J. McCARDIE, B.A., M.B., B.C. CANTAB.,
ANÆSTHETIST TO THE GENERAL HOSPITAL, BIRMINGHAM, ETC.

IN 1848 Heyfelder successfully used ethyl chloride as a general anæsthetic in the human subject. Benjamin Ward Richardson[1] also found it to be a good anæsthetic. He placed a pigeon in a chamber and diffused the vapour of the chloride through the chamber. He says: "The density of the vapour, taking hydrogen as unity, is 32·25. The period for producing narcotism with this vapour is of necessity prolonged and the vapour requires to be pushed freely and vigorously into the chamber or it will produce little more than excitement. The excitement is rather great, but in a minute or two the animal succumbs. The breathing is short and oppressed and the anæsthesia is not deep. During recovery there will possibly be some convulsive action." Ethyl chloride was tried as a general anæsthetic in animals by a committee of the British Medical Association.[2] This committee found that it quickly caused convulsions and stoppage of respiration so that its employment was denounced. Little more was heard of it till in 1895 and 1896 Carlson and Thiesing observed that in certain cases where the drug was used locally general anæsthesia was produced. Thiesing actually tried the effect of the drug on himself and others. Then Billeter and other dentists advocated its employment as a general anæsthetic in dental work. Lotheisen[3] of Innsbruck, *seeing in a German journal that Soulier* of Lyons had used ethyl chloride as a general anæsthetic, tried it himself. Soulier, however, did not use ethyl chloride, but another similar drug, ethylidene chloride. Soon a goodly number of cases of ethyl chloride narcosis were recorded by Lotheisen, Ludwig, and Wiesener, and since 1898 ethyl chloride has been employed in many thousands of cases. Seitz[4] of Konstanz collected up to the end of last April 16,000 cases of narcosis carried out throughout the world, of which I gathered for him 525 in England. In these cases there was one death, that of a very unfavourable subject.[5] Since April some thousands of other cases have been recorded, among them being another fatal case, also in a bad subject. The patient was a child, aged one year and nine months. The operation was tracheotomy for diphtheria. The patient died suddenly about three minutes after the beginning of the operation. Post mortem nothing beyond the usual pathological appearances of diphtheria was found except an enlarged thymus gland. Death in this case was due to heart failure and the ethyl chloride may not have been the principal factor in the fatality.[6]

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[3] MM. Béclère, Chambon, et Ménard: Annales de l'Institut Pasteur, 1896 and 1899.

[4] Note sur la Sérum-thérapie de la Variole, par M. A. Béclère, Nancy, 1897.

[1] Medical Times and Gazette, Dec. 28th, 1867.

Seitz, comparing the death-rate of ethyl chloride with that of other anæsthetics, gives the following figures:—pental, 1 in 200; chloroform, 1 in 3000; ether, 1 in 5000; ethyl bromide, 1 in 8000; and ethyl chloride, 1 in 16,000. Thus it would appear that, according to Seitz, the safest anæsthetic is ethyl chloride, with the exception of nitrous oxide, in which, of course, the death-rate might be put at 1 in many hundreds of thousands. However, perhaps it is not quite fair to compare ethyl chloride, which has only been used, say, some 25,000 or 30,000 times, with drugs which have been administered many scores and hundreds of thousands of times. I may remark that nitrous oxide is little used on the continent and that chloroform being the commonly used anæsthetic surgeons are always on the look-out for some quickly narcotising drug the action of which speedily passes over and which may be used for short operations. Ethyl bromide has in recent years been very much used, but its death-rate has been set at 22 in about 120,000 cases. This is probably too high a reckoning but it is certain that at least 22 deaths have taken place during, though perhaps not always from, ethyl bromide anæsthesia. Ethyl chloride seems to be quickly growing in favour abroad.

Physico-chemical characters.—The chemical formula is C_2H_5Cl. It is a colourless liquid of aromatic odour and has a sweetish taste. Its density is 0·92 at 0° C. The density of its vapour, taking air as unity, is 2·3 and its boiling point is 12·5° C. It volatilises at ordinary temperatures without residue. It is very combustible and burns with a green flame, setting free hydrochloric acid. As usually put up, in tubes, it does not show a tendency to decompose. I have used ethyl chloride which has been in stock for 18 months.

Physiological action.—Owing to its great volatility ethyl chloride is very quickly absorbed and almost as quickly eliminated. This is a great point in favour of safety. Wood and Cerna found that ethyl chloride caused augmentation of the respiratory movements and lowering of the blood pressure during narcosis, with immediate return to the normal state. The pulsations of the heart decreased in frequency at first and were increased towards the end of the administration. Seitz found from sphygmographic observation that the arterial pressure was rather raised during narcosis, while the vascular tone and cardiac action were stimulated. Koenig experimented on a dog, a rabbit, and a monkey. He *found that the rapidity of narcosis depended on* the degree of dilution of ethyl chloride with air. A *mixture of 1 in 10 of air* caused narcosis at the end of *six or seven minutes.* In equal parts narcosis was complete in *some seconds* and lasted *for several minutes.* In the dog the arterial pressure was slightly lowered. If ethyl chloride were used without any admixture *of air the lowering* of arterial pressure was regular and very *rapid, ending in stoppage* of the respiration and heart beats. In the monkey much the same effects were observed. "During *complete* narcosis," says Koenig, "the vagus nerve became inexcitable." Koenig's experience on the arterial depression agrees *with the* results of Malherbe and Roubinovitch[7] obtained in man by means of the sphygmo-manometer of Potain. In 24 cases cited by these authors arterial tension was lowered 22 times. In a general fashion the number of arterial pulsations varied directly as the degree *of arterial* tension, diminishing duri[illegible]
returning to the original r
vations they found in all
in one case of intermittent bigeminal pulsations during narcosis. Most authors have asserted that there are no changes in the urine after administration, but the two just quoted found biliary pigment and traces of albumin, indicating slight affection of the cells of the liver and kidneys. Such manifestations, however, were quite transitory. These, and other more serious changes, by the way, occur after chloroform and ether narcosis. Seitz says that the respiratory centre is affected before the cardiac apparatus, thus giving time for effective resuscitative *measures.*

From personal experience, during administration, I have not been able to satisfy myself that arterial tension, as a rule, is lowered, but have found that the pulse during deep narcosis sometimes becomes rather slower than normal and usually preserves its regularity. Respiration, however, is markedly stimulated, both in frequency and depth, during deep anæsthesia. The colour is improved, because of vaso-dilatation, which often leads to sweating, and, as I have once recorded in THE LANCET,[8] a well-marked rash, like the ordinary ether rash, has appeared over the upper part of the body. Considering the vascular flushing and stimulation of respiration I cannot imagine that, any more than is the case with alcohol, there can be any dangerous degree of circulatory depression while these exist; and, as a matter of fact, just as in the administration of ether, so long as respiration is forcible and colour is good I pay little or no attention to the frequency or quality of the pulse, even in a patient sitting upright for a dental operation.

With regard to the type of patient, children as a rule take ethyl chloride very well and quietly. Adults also very quickly pass under its influence. Any trouble during induction occurs usually with hysterical people, drinkers, smokers, and strong men. In most cases excitement varies directly as the quantity of air admitted during the induction of anæsthesia. The accounts of excitement recorded during induction and the failures to cause anæsthesia are in almost every case due to too much mingling of air with the vapour. It has been found that in Russia, where the patients are great consumers of exciting drinks, especially alcohol, tea, and coffee, excitement is much more common than in other countries where less of these liquids is taken. Seitz in 310 cases only twice found a state of excitement and then in alcoholics. The resulting tonic spasm of the extremities was so great as to make operation impossible. According to Blank of Kieff immoderate tea-drinking more predisposes to excitement than alcohol and coffee specially tends to cause vomiting.

Course of the narcosis.—A great many different statements as to the rapidity of action of ethyl chloride have been made, but from a perusal of all the literature that I can find it is apparent that the rapidity of induction of anæsthesia and the amount of excitement depend altogether on the degree of exclusion of air. In my earliest cases, recorded in THE LANCET,[9] I used Breuer's mask which admitted a fairly large amount of air along with the vapour and did not allow re-breathing. Then considering that certain cases of excitement and one or two failures altogether to induce anæsthesia were due to the too great dilution of the vapour with air in this inhaler, I, as I had previously suggested in a short article on ethyl chloride in THE LANCET,[10] began to administer from an Ormsby's ether inhaler, since when in more than 350 cases I have only once met with a marked degree of mental or muscular excitement during narcosis and that was in the case of a young man who had just been drinking whisky freely. The excitement, however, in his case was not uncontrollable. It is a great thing, I think, to say of any anæsthetic that in so many cases only one instance of excitement has been met with. Of course in the case of children there is occasionally struggling from fear during the first few breaths. Since using this inhaler I have found the induction of anæsthesia to be wonderfully speedy. I find the most useful form of Ormsby's inhaler is that devised by Hewitt as it contains a removeable water chamber which can be heated in hot water and, lying against the sponge, prevents it from freezing, as it is liable to do when ether or ethyl chloride is used. The tubes of ethyl chloride are graduated in cubic centimetres, hold 60 thereof, and have a larger spraying capacity than usual. I have mostly used kelene or Henning's æther chloratus pro narcosi, but am now also administering a preparation made for me by Messrs. Duncan, Flockhart, and Co. in Edinburgh. This has given very good results, is more agreeable, and, I believe, purer than kelene. The vapour of ethyl chloride is by no means disagreeable. I have had it myself and have found its subjective effects are as nearly as possible like those of nitrous oxide. Taking it one day from a Clover's inhaler consciousness disappeared in 20 breaths, and when next I looked at the clock I noticed that five minutes had elapsed. Personally, I have not suffered any after-effects. It is by some patients preferred to nitrous oxide. In certain cases this may be because I have given ethyl chloride by Ormsby's inhaler, through which, of course, respiration is perfectly free, while in certain old-fashioned forms of gas apparatus the airway is rather narrow and a sense of choking or suffocation may be brought about. The nervous patient, moreover, breathes much more easily through an Ormsby's inhaler than any other form of gas apparatus. Certain it is that the vapour of ethyl chloride if given in proper doses of from three to five cubic centimetres from an Ormsby's inhaler or any other is not unpleasant and is not irritating to the mucous membranes, nor does it cause a feeling of suffocation. Some administrators have used small cones made of nonporous material and others many folded compresses fitting closely over the face to administer ethyl chloride, thus as far as possible excluding air and possibly introducing an asphyxial element. It has been remarked that the struggling, which is not uncommonly associated with complete exclusion of air, is in itself liable to produce syncope. Again, such apparatus as a cone of paper or cloth must be pressed so firmly on to a patient's face as sometimes seriously to disturb him. The full-sized Ormsby's inhaler will hold about two full breaths of air when distended and when applied in the ordinary way probably already contains the amount of one full breath of air. If to this be added the amount of one expiration when the bag is applied it contains practically two full breaths of air, minus, of course, the 4 per cent. of oxygen which has been absorbed into the lungs during the last breath. Since 20 per cent., roughly speaking, of the air breathed consist of oxygen, and supposing that at each breath 4 per cent. are absorbed there remains in the bag enough oxygen for nine full breaths or thereabouts before there need be any lack of oxygen in the lungs, but as the breathing during induction is usually lighter than normal the time taken to absorb this quantity of oxygen is often much greater, and before the time that all the oxygen in the residual and supplemental air is used up full anæsthesia, as a matter of fact, is found to exist.

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[2] Brit. Med. Jour., Sept. 15th, 1880.

[3] Archiv für Klinische Chirurgie, 1898.

[4] Deutsche Monatsschrift für Zahnheilkunde, xx. Jahrgang, 1902, Mai Heft.

[5] Lotheisen: Münchener Medicinische Wochenschrift, No. 18, 1900. Translations, Birmingham Medical Review, January and December, 1900.

[6] Bossart: Correspondenzblatt für Schweizer Aerzte, Oct. 1st, 1902.

[7] Ma [illegible]

In the larger number of my cases ethyl chloride has been given for the removal of adenoids and tonsils or for dental extractions, and it will be of interest to know the time taken during induction of anæsthesia and the duration of anæsthesia after the removal of the mask. In some of these instances, where the operation was not expected to be severe, I have only induced light anæsthesia—that is, have allowed retention of the conjunctival reflex; but in most cases deep narcosis has been induced—that is, as shown by soft snoring or stertor, loss of conjunctival or corneal reflexes, lax muscles, usually rather dilated pupils, and eyeballs turned downwards and inwards. By the way, it may be remarked that the size of the pupil is much greater during early deep anæsthesia with ethyl chloride than is the case with other anæsthetics of which I have had experience. In a long case the pupil contracts after the first few minutes. So far as I can judge dilated pupil is generally coincident with deep anæsthesia, in the early stages at any rate. Anæsthesia, in free-breathing patients, seems to occur as quickly in the case of children as in adults. The single dose which I use with an Ormsby inhaler is generally about three cubic centimetres for a child and from five to seven cubic centimetres for an adult, sprayed on in one dose. Reapplication of the inhaler in certain of the dental cases resulted in a very much longer anæsthesia than the first.

In all cases where anæsthesia is not induced in less than one or one and a quarter minutes, or at the very most one and a half minutes, the reason is that air is being admitted to the inhaler or else not enough ethyl chloride is supplied. Since I have used Ormsby's inhaler I have never failed to induce anæsthesia, though in one or two cases it has been too short, and then the reason has been that I have not sprayed enough on. When using Breuer's inhaler I once or twice absolutely failed to induce anæsthesia and had to change to chloroform. Those administrators who use cones and compresses not infrequently confess to failures. I have not failed to anæsthetise alcoholics deeply with the Ormsby inhaler.

For continuation of anæsthesia I spray on two or three cubic centimetres every two or three minutes and allow air at fairly frequent intervals, according to the state of the patient; in fact, I give the drug much as I should ether, only, of course, less freely. Sometimes, to preserve full muscular relaxation one must abolish the conjunctival—or even corneal—reflex, especially for the first five or ten minutes; on the other hand, one may sometimes work throughout an operation with a brisk conjunctival reflex. The induction period is often startling in its rapidity if the breathing be free and deep, and I have known a patient to lose consciousness and not to flinch at a skin incision after six full breaths of ethyl chloride, or in 20 seconds.

I subjoin in tabular form the average figures of a number of cases taken from my note-books.

KELENE.

Single dose, from three to eight cubic centimetres, Ormsby's inhaler.

77 Dental Cases.

Average duration of induction, 50·9 seconds.	Average duration of anæsthesia, 71·3 seconds.
Longest case of induction, 2½ minutes (a fault in administration).	Longest case of anæsthesia, 2½ minutes.
Shortest case of induction, 20 seconds.	Shortest case of anæsthesia, 3 seconds.

197 Adenoid or Adenoid and Tonsil Cases.

Average duration of induction, 51·9 seconds.	Average duration of anæsthesia, 64·64 seconds.
Longest case of induction, 2 minutes 10 seconds.	Longest case of anæsthesia, 2 minutes 30 seconds.
Shortest case of induction, 15 seconds.	Shortest case of anæsthesia, 20 seconds.

Dental and Throat Cases.

Averages up to Dec. 9th, 1902.

Average duration of induction, 51·4 seconds.	Average duration of anæsthesia, 67·97 seconds.
The youngest patient, 11 months old, suffered from adenoids, and after 30 seconds' inhalation was anæsthetic for one and a half minutes.	

Let us now compare the times taken in dental cases to produce deep anæsthesia by nitrous oxide, and the duration of that anæsthesia, with those of ethyl chloride. According to Hewitt, the average inhalation period of nitrous oxide is 55·9 seconds and the available anæsthesia is 30 seconds. Thus the induction period with ethyl chloride is shorter by five seconds, while the available anæsthesia is longer by 41 seconds. As compared with "gas" and oxygen, Hewitt states that the average period of administration is 110·5 seconds. Thus ethyl chloride has the advantage by 59·6 seconds. The average available period of anæsthesia by "gas" and oxygen is 44 seconds, which is exceeded in the case of ethyl chloride by 27·3 seconds. In these comparisons it must be remembered that my averages include both cases of light and deep anæsthesia. If I were to take average figures of the cases only in which I induced deep anæsthesia, the advantage would be much greater for ethyl chloride. In series of cases of removal of adenoids and tonsils at the Ear and Throat Hospital, it has been found, using ethyl chloride as the routine anæsthetic, that in an hour more than 12 cases can be operated on—e.g., 10 in 45 minutes and even six in 20 minutes, making a total for one morning 16 in 65 minutes. The posture I prefer for these cases is the recumbent one, the head being on a level with the body—that is, without a pillow under it, while the foot of the table is raised about 12 inches by means of blocks. In this position there is very much less tendency for blood to get into the larynx than in the horizontal posture and I do not think that the bleeding is seriously increased. Jansen's modification of Doyen's gag, previously inserted unopened, saves time afterwards in the case of children especially, though it is easy to put in a Mason's gag after removal of the inhaler.

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[10] THE LANCET, July 20th, 1901, p. 123.

With regard to the use of ethyl chloride for these operations, the general opinion of operators in this city who have had experience of it seems to be favourable. Mr. F. Marsh[11] in his recent Ingleby lectures says that "on the average about two minutes of anæsthesia and analgesia was obtained in 20 of his cases and that its advantages over 'gas' are the longer time given and the absence of congestion and cyanosis. Recovery from its influence is quite as rapid and the patients are able to walk back to bed. No troublesome after-effects occurred in my cases." It has been claimed for ethyl chloride that the condition of analgesia persists for an appreciable time after apparent return of consciousness. This condition, as far as I can judge, lasts after short operations for about from a quarter to half a minute or so after apparent return of consciousness and is much more marked than in the case of nitrous oxide.

It has been said that with ethyl chloride it is impossible often to obtain full muscular relaxation and hence the uselessness of the drug for reduction of fractures and other opera- [illegible] 'hat, with [illegible] flaccid, [illegible] for a few minutes afterwards and in one case of operation on the foot I could not secure full muscular relaxation until a lapse of about eight minutes. The same thing occasionally happens with ether. I have had no chance of administering for the reduction of a dislocation and should be glad of one.

With regard to the after-effects the only ones that I have observed are headache and sickness and perhaps one very doubtful case of syncope. Headache is not very common and in my longest case, 26 minutes, was only slight, and lasted for about half a day. Sickness is decidedly more common and persistent than it is after nitrous oxide. Many patients, particularly if unprepared, vomit once on coming round. It has been claimed by some foreign observers that the after-effect of ethyl chloride narcosis is usually a feeling of well-being and even of hunger. The patients are able to eat within one hour or two hours after an ordinary administration. During recovery, particularly after short operations, the patient is rather more "fuddled" than after nitrous oxide, and any injudicious noise, talking, or restraint may lead sometimes to excitement, rarely forcible, for a minute. Marshall, in some 50 cases, noted two charges of indecent assault brought by patients as the noteworthy after-effect. Vomiting has only been severe in four of my cases. In the first one, a woman, aged 67 years, who had an aural polypus removed, vomiting did not begin till six hours after the operation, but it continued for 12 hours. The second patient was a delicate, nervous girl, to whom I gave ethyl chloride for an operation on the os calcis, lasting nine minutes. Afterwards she vomited at frequent intervals for 30 hours until she was given some albumin water, which, I am told, often lessens or stops post-anæsthetic sickness. This patient some months afterwards had ether, preceded by a little chloroform, for a second operation, and was again just as sick. On yet another occasion there was severe vomiting after another anæsthetic. In this case, then, it would seem that there was exceptional nervous or stomachic sensibility. In a third case, that of a boy, aged 13 years, who, after proper preparation, was anæsthetised for two minutes during operation on the foot, after-sickness and vomiting lasted for 24 hours. He was given chloroform on another occasion and was then just as sick. The fourth patient, a youth, aged 17 years, was given ethyl chloride, after the usual preparation, during four minutes for tenotomy and movement of the foot. He was sick for 12 hours. It is certain, I think, that the tendency to after-vomiting is much less than is the case with chloroform and ether, but is distinctly greater than with nitrous oxide.

With regard to the danger of ethyl chloride I have little to say, because I have seen none directly associated with it. There has been no such thing as syncope, respiratory or cardiac. The only difficulties which I have seen have been in mouth operations and were due to obstructions to respiration from blood in the throat or falling back of the tongue and were overcome by simple mechanical means. Cases of asphyxia and syncope have been described abroad.

Lately there has been used in France and advocated in this country by Dr. Rolland of Bordeaux a compound preparation called "somnoform." It is composed of 60 parts of chloride of ethyl, 35 parts of chloride of methyl, and 5 parts of bromide of ethyl. Its composition was decided by theoretical considerations, with a view to secure simplicity, rapidity of action, and elimination and safety. It is claimed that the diffusibility of methyl chloride, which evaporates at – 23° C., tends to quickness of action, while the chloride of ethyl prolongs anæsthesia and the ethyl bromide causes an after-analgesic state. I have tried this mixture in 11 cases and could find in its action no practical difference from that of ethyl chloride. My chief objection to it is that the ethyl bromide causes an unpleasant garlicky smell which pervades the room and also subjectively persists in the patient for one or two days afterwards.

Ethyl chloride would appear to be particularly advantageous in many short operations lasting up to ten or 15 minutes. Fromaget recommends it as preferable to chloroform in eye work, especially in paracentesis, iridectomy, peritomy, tenotomy, muscular advancement, enucleation, &c., and is particularly pleased with his results for operations on children. It has been used in gynæcological and obstetric [illegible] I have ac [illegible] on the tit [illegible] 68 years), 18 minutes; for circumcisions, from five to ten minutes; for drainage of the knee-joint, ten minutes; for mammary adenomata and cysts, several cases; for enucleation of the eye, four cases; for strabismus operations, several cases; in an operation on an old sinus from the kidney, 18 minutes; and for excision of hydrocele, 11½ minutes. In the last case anæsthesia was induced in half a minute and was as good as with ether or chloroform. The patient recovered consciousness in from one and a half to two minutes after cessation of the administration, and the only after-effect was slight headache for a time. One hour after the operation he had pudding and milk for dinner. Thus, the advantage here, as compared with ether or chloroform, was probably very great. I should like to recount my rough notes on the longest case.

The patient was a woman, aged 26 years. The operation was on tuberculous bone in the foot. The patient was thin and dreadfully nervous, had a quick pulse, was of good colour, and had some cough. Nothing abnormal was found in the heart. The ethyl chloride was administered first in the anæsthetic room, from seven to eight cubic centimetres being sprayed on to an Ormsby's inhaler. Anæsthesia occurred in three-quarters of a minute. The patient was then wheeled into the theatre. Two or three cubic centimetres were sprayed on to the inhaler at intervals during the operation. During the cleansing of the foot light anæsthesia was kept up, the conjunctival reflex being brisk and the legs and arms being rigid. Then at the commencement of the operation deeper anæsthesia was induced, the conjunctival and corneal reflexes being abolished, the pupils moderately enlarged, the legs, arms, and fingers still rigid, and the latter flexed; there was no movement. Between the eighth and ninth minutes the limbs relaxed, the pupils contracted, [illegible] increased. Some frothy mucus was secreted and came from the mouth. As time went on lighter anæsthesia was used, slight phonation and the conjunctival reflex being allowed. Throughout the operation the face was flushed as if ether was being used. The administration lasted for 25 minutes, [illegible] the drug were used. Full [illegible] inute after the removal of [illegible] d as she was sent away on the ambulance and in the ward once vomited some frothy mucus. Afterwards there was no nausea or vomiting. In the afternoon she felt rather drowsy and complained of some frontal headache the rest of the day but slept well at night.

In dental work I have several times found ethyl chloride of the very greatest advantage—for example, in the following cases.

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[11] Marsh: THE LANCET, June 21st, 1902, p. 1751.

A big strong policeman came to have two or three teeth removed. One of the other anæsthetists at the Dental Hospital had previously tried to administer nitrous oxide. He just got the patient under but no more; the man came round before anything could be done. He was brought to see me. Having had one or two previous unsuccessful experiences of policemen as subjects for nitrous oxide I did not care to try it again, and as the usual alternative anæsthetic would have been nitrous oxide followed by ether, by no means a short or pleasant interruption in a busy morning at the Dental Hospital, more particularly as the patient was unprepared and wished to get back to duty soon, I decided to give him ethyl chloride. I put six or seven cubic centimetres on the Ormsby inhaler and after inhaling for one minute without a trace of excitement he was very deeply anæsthetised—i.e., his colour was heightened, his breathing was stertorous, the eyeballs were turned down, the pupils were enlarged, the conjunctival and corneal reflexes were absent, and the limbs and jaws were lax. Anæsthesia lasted more than one and a half minutes. The patient quietly recovered in another minute and in two or three more walked out of the room.

To take another case. A short, thickly built, heavy-jowled man of middle age, with thick and fat tissues about his neck and jaws, probably a beer-drinker, came into the anæsthetic room at the Dental Hospital suffering from a large dental abscess and marked trismus. By the way, it is important to remember in this type of patient that just as their tissues are outside so they are inside—that is to say, the tissues inside the mouth, naso-pharynx, and airway are fatty and thickened, thus narrowing the air passages. Again, the abscess bulged largely into his mouth, still more narrowing its cavity. Any congestion, cyanosis, or increased spasm caused by nitrous oxide would entail serious difficulty and danger during administration. Similarly, the increased circulation, congestion, mucus, rapid breathing, and spasm which ether would set up would tend to cause dangerous trouble with the respiration. In such a case, therefore, chloroform usually would be the chosen anæsthetic. Administration would be by no means a pleasant or an easy task in this unprepared patient. Having put a very small prop between the teeth, I gave him ethyl chloride, with a result almost exactly the same as in the last case. During the deep anæsthesia the jaw muscles became relaxed, Mason's gag was introduced, and not only the tooth causing the abscess but half a dozen others were deliberately removed during an anæsthesia of from one and a half to two minutes. There was no excitement or after-effect at all.

Yet another recent case. I was asked to give prolonged "gas" by Paterson's apparatus to a female patient for the extraction of eight or ten teeth. She had nasal obstruction and could breathe through the nose only slightly. I managed to get her under but could not keep her so, so she came round without anything having been done and was very much upset by the non-success. It is a great mistake, I think, in these cases to allow the patient to leave thinking that she cannot take an anæsthetic, because she would be fearful another time and believe that the administration was impossible or dangerous, so I proposed to give her ethyl chloride at once. She took it perfectly. We had a long anæsthesia of one and a half minutes, during which the operator did more than he originally proposed to do, and the patient recovered very well, though afterwards she suffered from some degree of shock, due largely, I think, to the previous failure.

There does not seem to be any more than one contra-indication to the administration of ethyl chloride. In marked narrowing about the larynx chloroform is better as being less stimulative. Patients with heart, lung, and kidney disease seem to take it well. In the case of children ethyl chloride is a perfect anæsthetic for small operations, such as opening abscesses, taking out teeth, especially the extraction of four six-year-old molars in a crowded mouth, and the removal of adenoids or tonsils. It is safe and rapid in its action and recovery in them is usually without after-effect, especially if they are properly prepared. It is practically impossible to give "gas" satisfactorily for any operation lasting more than a quarter of a minute in the mouth of small children. Not only do they become cyanosed and bleed so much that it is almost impossible to see what one is trying to do, but convulsion of the limbs and body is very awkward and recovery is exceedingly rapid. With ethyl chloride, however, there are none of these disadvantages.

Abroad, ethyl chloride is increasingly used in the so-called "mixed" anæsthesia—i.e., as preliminary to chloroformisation just as in England "gas" is often given before ether. Malherbe,[12] who has had an experience of 700 cases of ethyl chloride narcosis, says that by this method ethyl chloride suppresses the dangers of primary syncope under chloroform. Again, it much lessens shock and the quantity of chloroform used and also diminishes subsequent gastric troubles. I have often given ethyl chloride before ether and have had as good and often much better results than by the preliminary administration of "gas," but I have not used it as a forerunner of chloroform.

I have not tried ethyl chloride for the largest operations because I see no advantage in it over ether or chloroform, for one is working within narrow limits because of the tendency to quick return of consciousness. I do not think that very quick recovery (in one or two minutes) after big operations is an advantage to the patient, who would too often awake to the consciousness of acute pain, mental distress and shock, apart from the fact that his immediate surroundings and removal to bed would be, to say the least, most unpleasant. However, abroad, hernial, renal, and other operations have been done under ethyl chloride administered for well over an hour in the longest cases. It is well to recognise that all narcotic drugs have limitations, and ethyl chloride certainly has them, if one is to do the best for one's patient. I think, with many foreign observers, that it is well suited for many short operations lasting up to 15 or 20 minutes. Especially for short throat operations by skilled and quick operators, and for certain dental cases, is ethyl chloride of great advantage. As compared with ethyl bromide, which is much used abroad instead of "gas," ethyl chloride is safer because, as Binz says, the bromine compounds have a much more lasting and toxic effect on the tissues than the chlorine compounds. According to Overton[13] narcosis with chlorine derivatives can be kept up much longer than is the case with bromine compounds. This probably depends on the fact that watery solutions of bromine compounds gradually split up and give off free bromine. Certainly the death-rate is much less in ethyl chloride than in ethyl bromide. Again, ethyl bromide leaves behind it a garlicky smell and taste which persist in the patient's breath for one or two days after. The drug, too, is very liable to become impure on keeping.

In conclusion, with regard to the first and all-important question of safety, what I can say is that, having given ethyl chloride 450 times, I have never had any trouble during narcosis ascribable to the drug itself. I give it now with confidence and out of a total of more than 1000 cases last year of administrations in general, as apart from dental, surgery I have administered it about 350 times. I should judge that any serious effects would be seen first in the respiratory apparatus and secondarily in the heart. The general action on the circulation and respiration appears to be stimulative.

PS.—Since this paper was written I have brought up my total of administrations to more than 620 and have had little further noteworthy to record except that I administered it to a patient for removal of adenoids and tonsils immediately after recovery from fainting. The ethyl chloride greatly improved the colour and respiration, but just at the end of the administration, in order to be on the safe side, I added a dose of ether to the Ormsby's inhaler. I have lately been using ethyl chloride containing about 7 per cent. of methyl chloride. This addition probably has some advantage in quickening evaporation and carrying off ethyl chloride vapour. In regard to ethyl chloride in dental work, it is not to be preferred to nitrous oxide for routine use. It is of advantage in cases where the prolonged methods of administration are not available or the conditions are such as I have described in the cases related above. In dental work the passing over from ethyl chloride narcosis to that of ether is much quicker and easier than from that of nitrous oxide. If one and a half minutes' anæsthesia is not enough for the operator, an ounce of ether should be poured into the Ormsby's inhaler, which is quickly applied, and full narcosis will occur in two or three minutes. By giving a full dose of the drug one can always be sure of one and a half minutes' anæsthesia. By reason of the portability of the apparatus and the quickness of the phases of narcosis, ethyl chloride when administered from an Ormsby's inhaler is an ideal anæsthetic for short operations in country practice.

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[12] Loc. cit.

[13] Studien über die Narkose.

Birmingham.

ON SOME

OPERATIONS FOR RECTIFYING CROOKED AND DEPRESSED NOSES.[1]

BY W. J. WALSHAM, F.R.C.S. ENG.,

SURGEON TO, AND LECTURER ON SURGERY IN THE MEDICAL SCHOOL OF, ST. BARTHOLOMEW'S HOSPITAL.

DURING the last 20 years I have had under observation a very large number of various external deformities of the nose. Some of the operations which I have devised and performed for their correction have not, as far as I know, been brought prominently before the notice of the profession.

FORCIBLE STRAIGHTENING.

In THE LANCET of August 29th, 1891, p. 492, I described a nasal forceps that Messrs. Arnold and Sons had made for me for seizing the nasal bones and twisting them forcibly into position, but these can only be safely employed in recent or comparatively recent cases. When the injury is of long standing and the bones have become consolidated in the deformed position so much force is necessary to move them that there is a risk of severe laceration of the mucous membrane and tearing of the skin. Some further procedure is then usually necessary to allow of satisfactory replacement. In many of these cases of crooked nose it will be found that the deformity is not the result of a fracture of the nasal bones but of their bodily displacement at the fronto-nasal suture. On looking at the patient from the front this may not at first sight be evident, as the anterior or cartilaginous portion of the nose is generally at the same time deflected in the opposite direction, a slight protrusion occurring at the spot where the cartilages join the nasal bones. This protrusion frequently leads the patient to imagine that a fracture has occurred here. On examining the patient from above and behind it is seen clearly that the nasal bones are bent to one or other side at their junction with the frontal bone and at the same time slightly rotated on their long axis so that whilst the surface of one bone looks more upwards than normal the other one looks less upwards than normal. It will also be obvious that the slight protrusion above spoken of is caused by the angle of bending where the cartilages spring from the bones. On the side opposite the protrusion a corresponding slight depression will be found to exist. The deflection of the bones is frequently overlooked by those whose attention is [illegible] se, which points in [illegible] interior of the no[illegible] to be deflected. For such cases forcible straightening is generally insufficient, but I have succeeded in many by supplementing the straightening by a subcutaneous osteotomy along the naso maxillary suture.

SUBCUTANEOUS OSTEOTOMY ALONG THE NASO-MAXILLARY SUTURE.

An incision, varying in length from an eighth to a quarter of an inch, is made through the skin along the course of the naso-maxillary suture down to the bone. Through this incision a small chisel, such as is used in mastoidectomy, is introduced and carried by a few taps with a mallet through the bone, care being taken not to puncture the mucous membrane. The bone incision is then prolonged sufficiently up and down along the course of the suture to detach the nasal bone from the nasal process of the superior maxilla, the chisel is withdrawn, and the small skin puncture is temporarily closed by a pad of aseptic gauze. The opposite nasal bone is then detached in a similar way. A stitch of the finest fishing-gut may be used for drawing the edges of the skin puncture together and the wound is sealed by a collodion gauze dressing. The delicate linear scar is practically invisible in a few weeks. The bones can [illegible] either by the fingers or by t[illegible] replaced they will retain the [illegible] any special apparatus or may be steadied for a day or two by some form of light nasal truss.

A very good impromptu truss can be made by an ordinary pair of forceps and a roller bandage. A piece of rubber tube about half an inch long is slid over both blades of the forceps so as to compress their ends together—the amount of pressure to be exercised by the ends on the bones or cartilages being regulated by the distance the rubber ring is passed down over the forceps The blades, protected by rubber, are then placed one on each side of the nose over the nasal bones or cartilages. The pressure exercised by the rubber should be just sufficient to grasp the bones gently and to steady them in position. A pad of lint is next placed on the forehead just above the glabella to protect the skin and the forceps are bound down to this by a strip of adhesive strapping. Under the upper end of the forceps a second pad is placed of sufficient thickness to tilt the ends grasping the nasal bones downwards far enough to insure a good hold. The arrangement is next secured firmly in position by a roller bandage. It need not be worn for more than a day or two, as after the first few hours there is little fear of the bones becoming displaced, since consolidation takes place very rapidly.

A somewhat similar osteotomy I have found useful in diminishing the breadth of the flattened nose before resorting to the injection of paraffin for restoring the bridge, but in such cases some tying of the bones together by the subcutaneous suture or by wiring will generally be also required.

SUBCUTANEOUS SUTURE OF THE LATERAL NASAL CARTILAGES.

In slight degrees of depression of the cartilages the result of injury or disease the flattened bridge can be materially sharpened by this method. A straight needle armed with fine kangaroo tendon is passed through the skin and the depressed cartilages just below their junction with the nasal bones and brought out through the skin on the opposite side. A curved needle is now substituted for the straight one, introduced through the same puncture, carried about a quarter of an inch downwards between the skin and cartilage, and then made to perforate the skin. The straight needle is again employed to carry the suture through the second puncture and across the nose through the depressed cartilages and is brought out at a corresponding spot on the opposite side. A loop of suture is thus left on one side of the nose between the skin and corresponding cartilage By a similar manœuvre the suture is brought out through the first puncture. The suture is next drawn tight, bringing the cartilages together, and the knot is buried at the first puncture. In passing the suture the mucous membrane should not be perforated if it can possibly be avoided and care should be taken that no portion of the deeper layers of the skin is involved or some puckering of the skin at the seat of the puncture will be produced. The punctures are closed by collodion. In many cases a subcutaneous osteotomy of the nasal bones will be found necessary at the same time.

WIRING THE CARTILAGES TO THE NASAL BONES.

When the depression of the cartilages at their junction with the nasal bones is such that the ends of the nasal bones project under the skin subcutaneous suture will not as a rule be sufficient. For such I have obtained the happiest results by wiring the cartilages to the bones. An incision is made exactly in the centre of the nose in a vertical direction, [illegible] half an inch above the ends of the bones [illegible] inch or more over the cartilages. [illegible] are carefully dissected up from [illegible] a good half-inch on each side. With a sharp knife the cartilages are next divided transversely along the line of the osteo-cartilaginous junction, avoiding perforation of the mucous membrane. If the cartilages can now be brought up to the level of the bones well and good; if not the projecting ends of the bones may be snipped off with fine bone scissors The end of each bone is now perforated with a small bone-drill and a fine silver wire suture is passed through the hole thus made with a curved needle, which is then made to perforate the corresponding cartilage from within outwards On twisting the loop the cartilage will be drawn up into place. The opposite side is now treated in the same way, the ends of the wire are securely beaten down, and the external wound is closed with the finest fishing-gut sutures and sealed with a collodion gauze dressing. In this way I was recently successful in curing the most hideous deformity in a lady who had literally smashed her nose in a severe fall from a height. The ends of the nasal bones projected beneath the stretched and reddened skin and threatened to protrude (Fig. 1). The cartilages were depressed a good quarter of an inch below the level of the bones and their distal ends were tilted upwards so that the nostril looked almost directly forwards. The profile of the nose was so revolting that the patient could not venture out without wearing a thick veil. I performed the operation above described and succeeded in fixing the cartilages in an excellent position. A temporary suture having a subcutaneous loop on one side was passed through the cartilages and tied over a piece of rubber tube on the other for the purpose of drawing the cartilages together and so sharpening the bridge whilst consolidation was taking place. The wound healed by first intention. The temporary suture was removed on the fifth day and the result was so satisfactory (see Fig. 2) that the patient did not think it worth while to have the very slight depression that remained obliterated by the injection of paraffin. When last seen the parts had consolidated firmly without any sinking down of the nasal ridge.

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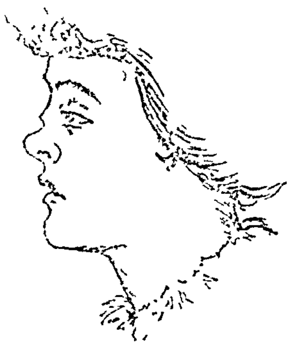
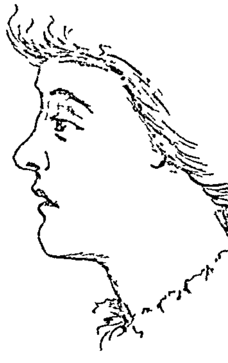
[1] An abstract of a clinical lecture delivered at St. Bartholomew's Hospital on Feb. 11th, 1903.

FIG. 1.



Before wiring.

FIG. 2.



After wiring.

INJECTION OF PARAFFIN SUBCUTANEOUSLY.

So much has been written of late on this subject that it need not be referred to further than to say that I have kept the cases on which I have thus operated under observation and have found that the improvement remains. The part filled with the paraffin has gradually hardened and the improved appearance of the nose continues as good as it was the day after the injection. I commenced this treatment just after the first account of it was made known in this country but have not published my cases as I wished to learn first how the method would stand the test of time. This is an important element in all cases of new methods of treatment; for instance, I know of several cases in which great improvement was accomplished by transplanting bone, inserting gold plates, &c., but the improvement was not maintained. The nose again fell in and in the case of the plates so much irritation was set up that they had ultimately to be removed.

SHIFTING THE SEPTUM BODILY AT ITS JUNCTION WITH THE FLOOR OF THE NOSE.

In some cases of crooked nose it will be found that the whole septum is fixed to the nasal floor out of the median line. This is perhaps more especially so in patients who have been the subject of complete hare-lip or who have undergone no operation, or an imperfect operation, for this deformity. In a patient, aged 15 years, on whom I operated a year or so ago an attempt had been made in infancy to cure the hare-lip but this had failed and nothing further had been done. When she came under my observation there was a very wide cleft of the lip on the left side extending through the alveolar process of the maxilla into the nose and the nasal septum was a quarter of an inch or so to the right of the middle line. Before closing the cleft in the lip I first turned back the right half of the lip, exposing the right nasal cavity as well as the left, and then with strong bone scissors I detached the maxillary crest from the floor of the nose. The septum could now be carried over to the left and was fixed in the middle line by sutures. In this way the nostrils were equalised and the nose was brought over to the straight in its anterior half. An osteotomy was at the same time necessary to correct the deflection of the nasal bones. Subsequently the gap in the lip was closed in the ordinary way and the shape of the nostril was improved by a plastic operation on the left ala and the patient after a prolonged stay in the hospital was discharged with a most satisfactory lip and nose. The improvement was very great. In another patient the hare lip had been fairly satisfactorily united in infancy, but the septum remained too much to the left and the nose in consequence projected to that side. Here I turned up the upper lip after the manner of Rouges's operation and having exposed the septum cut it with the maxillary crest from the maxillary bones with strong bone scissors. The whole septum with the anterior part of the nose could now be carried over to the right where it was easily held by a plug in the left nostril. As far as I know this method of transplating the bone of the septum has not been hitherto employed. Anyhow, I have not seen any account of it, but I would recommend it strongly to surgeons as a very desirable measure in similar cases.

FORMATION OF A SEPTUM FROM THE MAXILLARY CREST.

Where the whole septum has been destroyed as the result of ulceration together with the anterior part of the nose one of the difficulties to be contended with is to give firmness and rigidity to the restored organ, whether the flaps are taken from the forehead, cheeks, or arm. I remember many years ago an endeavour was made by my colleague, Sir Thomas Smith, to obtain this firmness by first transplanting a portion of the cartilage of the ear into the flap of skin it was subsequently intended to employ for the new nose. This, however, was before the days of antiseptics and the attempt unfortunately failed. I have recently manufactured a septum by turning up the maxillary crest. The patient had lost the whole of his septum and about a third of the anterior part of his nose, his nasal cavities thus being converted into a huge gaping chasm I made two parallel cuts through the mucous membrane down to the bone about half an inch apart along each side of the maxillary crest and as far back as I could reach, a cross cut uniting the parallel incisions. A small mastoid chisel was next introduced obliquely into each incision, the maxillary crest was detached from the underlying bone and bent forwards with the overlying mucous membrane which in front served as a hinge and carried to the detached bone its blood-supply. The septum thus made was attached above by temporary sutures to the remaining skin of the nose and further held in position until consolidation in the new portion was complete by a piece of rubber tube passed behind it with the ends of the tube fixed on the face. The bone remained in position, thus forming a new columella. Later I intend to restore the nose still further by transplanting a skin flap. Without the new septum this would have been flabby, unsupported, and liable in time to sink in, but I hope now this will ultimately form a very respectable nose. It seems to me there are many possibilities of restoring the septum from the maxillary crest or even from a piece, if necessary, of the whole thickness of the hard palate, and I have no doubt that further attempts will be made to utilise this bone. The case is not yet complete but bids fair to be a marked success.

Harley-street, W.

ON THE USE OF IODIPIN IN CASES OF UTERINE FIBROID.

BY JOHN A. SHAW-MACKENZIE, M.D. LOND.

IODIPIN is, as I understand, a combination of iodine and sesame oil. It has been introduced by Messrs. Merck of Darmstadt, it is said to be an efficient substitute for iodide of potassium generally, and, according to all accounts, it causes no disagreeable effects. Having long taken an interest in the medicinal treatment of uterine fibroids I am fully aware that good authorities have recommended iodide of potassium as producing at least amelioration of the symptoms and that Dr. Samuel Ashwell[1] and others in the past have recommended iodine as producing arrest of growth, diminution, and sometimes disappearance. I therefore wrote in November last to Messrs. Merck asking for special information as to the use of iodipin in uterine fibroid and menorrhagia, but was informed that so far as they knew it *had not been used in such conditions.* I have since had opportunities of treating two cases by the hypodermic method of administration and not having so far heard of or seen any reports of cases similarly treated I venture to record the following notes.

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[1] Diseases of Women, 1845. On the Diminution and Disappearance of Uterine Tumours, THE LANCET, Feb. 18th, 1854, p. 180.

The first patient was under the care of Dr. John Shaw at the North-West London Hospital and I am much indebted to him for the help and opportunity which he gave me. She was 33 years of age and attended as an out-patient on Dec. 10th, 1902. A large, moveable, somewhat elastic tumour, presumably a fibroid, extended to an inch above the umbilicus and the abdominal wall was tightly stretched over it. On a *subsequent occasion the uterine sound* passed three and a half inches and the mass appeared to move with it. She had been married for five years but had never been pregnant and from the first this condition was excluded. Her father died early from pulmonary tuberculosis. Her mother and two sisters were stated to have suffered from fibroid. A small lump was first noticed by the patient two and a half years ago. She complained of constant loss of blood "all the month round," the first few days of the period being profuse. The os uteri and cervix were healthy and high up, the tumour itself being largely abdominal. *After explaining what treatment* was proposed, to which she readily consented, one cubic centimetre of iodipin (25 per cent. strength) was injected into the cellular tissue of the buttock. On the 17th, as there was still some loss of blood, two cubic centimetres were injected on the other side. On the 31st it was stated that there had been no hæmorrhage for a fortnight. Three cubic centimetres were injected, the injections being made alternately into either buttock. On Jan. 7th it was stated that there had been *no loss of blood for three weeks* and the tumour was found to be diminished to a finger's breadth below the umbilicus. On Jan. 21st she stated that the period began on the 7th and lasted for eight days, the first two days being free. The tumour was on this day well below the umbilicus. Five cubic centimetres were injected and after this date seven cubic centimetres were injected twice a week. On Jan. 28th a period began. The tumour was swollen and had risen to just below the umbilicus. On Feb. 11th there was obvious uniform reduction of the tumour; it felt softer and a sulcus could be felt at the fundus. On the 25th the tumour was again swollen to just below the umbilicus. Ten cubic centimetres of iodipin (10 per cent. strength) were injected and the injections were continued twice a week. On March 4th *she stated that a period began on the 1st* but was very slight; it lasted for six days. The tumour was again obviously reduced. On the 11th the tumour was again found to be swollen to within an inch of the umbilicus. On the 18th it was stated that a period began two days before but the loss was slight. The sulcus at the fundus was an inch below the umbilicus, but the two sides were nearly on a level with it. The tumour, however, seemed to be flatter and softer and the abdominal wall could be easily raised up from its surface. Ten cubic centimetres (25 per cent. strength) were injected.

The full dose of iodipin is stated to be ten cubic centimetres (25 per cent. strength) for ten days consecutively. No local or general inconvenience whatever has in this case *followed the injections which were given with due regard* to antiseptic precautions. All that, so far, can be said is that there has certainly been an improvement in the patient's general health and that th[illegible] though the maximum had not [illegible] fore the treatment was commenced. Pain was complained of at times but the patient was not laid up or much inconvenienced. It is agreed that there is no indication for operative interference and the treatment is to be continued a little longer.

The second patient was unmarried and under 40 years of age. When I was called to see her on Dec. 21st, 1902, she was in much pain which was referred to the left inguinal region. Her tongue was coated, her temperature was 101° F., and there was inability to retain food. The bowels were [illegible] several days. A large hard mass, [illegible] l reaching to an inch above the [illegible] *she was losing blood freely* and passing large clots. For some long time she had been laid up at the menstrual periods with profuse losses. Enemata were ordered and on the next morning the bowels had been relieved, her temperature was normal, and she expressed *herself as quite comfortable. On Dec. 30th, the period* being just over, Mr. Skene Keith kindly visited her with me. He diagnosed a freely moveable fibroid (with outgrowths) and extending well into the pelvis, but not fixed or pressing on the bowel. The cervix was small and healthy, with the tumour above moving with it and reaching to the level of the umbilicus. He agreed with me that there was no indication for operation and consented to a trial of iodipin being made. (I should mention that someone else had a few days before, and independently of me, *diagnosed* a large fibroid and had recommended its removal.) On Jan. 1st, 1903, I commenced injections of two cubic centimetres of *iodipin (25 per cent. strength) into the cellular tissue of the* buttock and continued injections daily for ten days on alternate sides, doubling the dose on the fifth day. As the first insertion of the needle caused pain, on subsequent occasions I first applied a piece of ice to the surface which proved perfectly satisfactory. On the 6th the tumour was two fingers' breadth below the umbilicus. A right lobe was now easily defined to the right of, and below, the umbilicus. Not knowing how much or how little might be expected of the iodipin I prescribed also teaspoonful doses of Gardner's syrup of hydriodic acid three times a day and four cubic *centimetres of iodipin were now injected. On the 8th the main* mass of the tumour had diminished astonishingly. A sulcus could be felt between it and a smaller lobe to the left. On the 10th the patient went out of town feeling very well. On the 19th she returned; the tumour was then swollen to about two fingers' breadth below the umbilicus and both lobes were enlarged. Six cubic centimetres of iodipin were injected and the injections were continued twice a week until March 10th. On Jan 20th the period commenced without notice or pain. The loss of blood on the first day was said to be free but without clots. Numerous superficial blue veins were perceptible over the buttocks and there were slight cough and hoarseness. The bowels also were troublesome. The insertion of the needle on this day drew a drop or two of blood *and all the previous punctures were congested* with slightly bruised areas. On the 23rd the patient said that she could hardly recollect having previously had such an easy time. She had no pain and no loss of blood worth mentioning. It ceased on the 25th. On the 27th Mr. Skene Keith kindly visited her again and reported that the tumour was less by one-third than at his previous visit and that it was quite two and a half inches from the umbilicus. There was no dropping into the pelvis to account for the diminution. On Feb. 7th the right lobe seemed to be quite an isolated small oval moveable tumour. The main mass could only be felt on deep palpation above the pubes. On Feb 21st a period began. The tumour was slightly swollen but less so than at the last period. The same local and general vaso-motor condition *was present. There were no pain and only a slight loss of* blood lasting four days, the patient going about all the time. On March 10th she went out of town and on the 17th she returned in excellent health. The tumour and the lobe could still be felt but deep palpation was required to make them out Six cubic centimetres of iodipin were injected. The patient is now going abroad for a time.

Hildebrandt[2] noted in his cases in which ergotin injections were used that the needle drew blood at the menstrual periods. Both these cases of his and this one of mine conform probably to those cases of vaso-motor origin noted by Strassmann and referred to by Dr. Thomas Wilson.[3] There was no cardiac complication in this case The case itself seems to be in marked contrast to the preceding one, in which there is no particular general periodical vaso-motor disturbance. Possibly iodine may influence the vaso-motor or trophic centres themselves, in addition to its presumable action on the muscle element and nutrient vessels No particular local or general inconvenience has followed the [illegible] agreeable effects often associated with the administration of iodide of potassium. An irritating dry patchy eczema appeared on Feb 25th, continuing more or less, and some darkish stains, lasting a day or two but disappearing without trouble, recently showed themselves. The treatment is a continuation of the older iodine one, only, as it seems to me, by a more convenient, rapid, and direct method of administration of the drug. It does not confine the patient to bed or the house, nor is there apparently any disagreeable effect. The cases are only two in number and sufficient time has not elapsed for forming a proper conclusion, but I publish them in the hope that others may be induced to put such a simple method to the test before resorting to operation.

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[2] Berliner Klinische Wochenschrift, 1572. (W. H. Ranking: Abstract of the Medical Sciences, 1872.)

[3] The Relations of Organic Affections of the Heart to Fibro-myoma. Transactions of the Obstetrical Society, vol. xlii., 1901.

Grosvenor-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF OPERATION FOR ACUTE HÆMATEMESIS.

BY ARTHUR H. BUCK, F.R.C.S. EDIN.,
ASSISTANT SURGEON TO THE SUSSEX COUNTY HOSPITAL.

As operations for acute hæmatemesis are still comparatively rare the following may be thought worth recording.

The patient, who was a woman, aged 39 years, had suffered from heaviness and fulness in the epigastrium after food off and on for six months. She had experienced nausea but was not sick. There was no history of melæna. Dr. F. Robson of Haywards Heath saw her first on Jan. 21st, 1903, when she had vomited one pint of blood and was collapsed. Adrenalin was administered by the mouth and rectal feeding was ordered. On the 22nd there were repeated attacks of hæmatemesis and much *melæna. Ergotinin and adrenalin* were given. On the 23rd further hæmatemesis took place and I saw the patient in the evening with Dr. Robson. Her condition was then one of collapse and she had lost over six pints of blood by measurement in two and a half days. After a consultation with Mr. G. C. Clarke of Lindfield and Dr. Robson an operation was agreed upon for the following reasons: (1) that it was not a proper thing in her condition to advise removal to the Sussex County Hospital; (2) that judging from the repeated attacks of hæmatemesis there was likely to be another; and (3) that to a patient already *in extremis* another attack was likely to prove fatal before assistance could be obtained. The difficulties of the situation were increased by the patient living in a cottage and by the only light being that of a paraffin lamp.

The stomach was opened by a vertical incision anteriorly, as no ulcer could be felt from outside, and the ulcer was found at the cardiac end on the posterior wall by sweeping the finger round the mucous membrane. It was brought into view with some difficulty and proved to be acute, with no thickening around the edges. The diseased area having been excised the aperture was closed posteriorly by a purse-string suture and one or two Lembert's sutures on the peritoneal aspect and anteriorly by a second purse-string suture in the mucous membrane. The anterior incision was closed with Lembert's sutures. Mr. Clarke administered the anæsthetic. The patient was put back to bed apparently no worse for the operation. Dr. Robson, who conducted the entire after-treatment, at first administered strychnine and saline injections and afterwards fairly large nutrient enemata were given, about two pints a day being absorbed. The services of an excellent nurse were obtained on the second day. On the thirteenth day—namely, three days after the first food had been given by the mouth—a somewhat severe attack of parotitis set in on the right side followed by one on the left side. Except during this attack and for some little time afterwards the temperature was normal. The patient, when seen on March 20th, was perfectly well in every way.

The following statistics are quoted from Mayo Robson and Moynihan's "Surgery of the Stomach": A series of 26 operations in acute cases showed 14 deaths and a series of 19 in chronic cases showed two deaths (Hunterian Lectures). A later series in America showed 13 deaths in 32 acute cases and six deaths in 31 chronic cases. Mr. B. G. A. Moynihan in a paper read before the Royal Medical and Chirurgical Society on Jan. 27th, 1903, and published in THE LANCET of Jan. 31st, p. 294, divides the cases of hæmatemesis into those the result of acute and those the result of chronic ulceration and says: "In hæmorrhage from an acute ulcer medical treatment alone will suffice, surgical measures will very rarely be necessary. If any operation has to be done gastro-enterostomy will probably prove to be the most effective. In chronic ulcer operation should be advised as early as possible." So far as my experience goes I should have said that it was hardly safe to be quite so dogmatic, as besides the above case I have recently come across a case where a girl with a chronic history suddenly died from profuse hæmorrhage from a chronic ulcer. Other cases of perforation have come under my observation where it was quite impossible from the history to say whether the ulcer was acute or chronic before operation. An operation for acute hæmatemesis, whether from an acute or chronic ulcer, seems to me to be an emergency operation in which one would not feel satisfied unless one performed that for which the operation was undertaken and secured the bleeding point. As to whether a gastro-enterostomy was advisable then or later would, I suppose, depend upon the condition of the patient at the time, both generally and locally, and upon the past history of dyspepsia.

Brighton.

A CASE OF IODOFORM POISONING.

BY ALAN H. MUIR, M.B., CH.B. GLASG.,
HOUSE SURGEON TO THE SWANSEA GENERAL HOSPITAL.

THE patient, a man, aged 35 years, was admitted to the Swansea General Hospital on March 5th, 1903, with a large non-tuberculous abscess on the calf and the thigh of the left leg. The temperature was 102° F., the pulse was 100, and the general condition was fair. On the 6th the temperature ranged from 98° to 99°. On the morning of the 7th I opened the abscess, irrigated the cavity, and put in a connecting drainage-tube. Whilst my assistant was putting in iodoform quite half an ounce or more dropped accidentally into the large cavity. For 24 hours the temperature remained normal. At 8 P.M. on the 8th the patient had a rigor, when the temperature rose to 102°, and two hours afterwards it was 104°, the pulse being 140 and weak and thready and the respirations being 24 and normal in character. The patient, who now became restless and delirious but remained conscious, vomited three or four times. Nothing noteworthy regarding the pupils, the urine, &c., was observed. Quinine and brandy were now administered and at 12 midnight when the temperature was 103° the cavity was washed and swabbed out, the iodoform forming quite a coat. In 12 hours the temperature, which had come down gradually, was normal, the pulse was 120 and fair, and the patient was quiet and sensible. This condition was maintained, the temperature remaining normal, the pulse being 80 and good, and the respirations being 24.

For permission to publish these notes I am indebted to Mr. W. F. Brook, senior surgeon to the Swansea General Hospital.

Swansea.

A CASE OF CHYLIFORM ASCITES.

BY GEORGE A. CLARKSON, F.R.C.S. ENG.

IN connexion with the annotation on chyliform ascites published in THE LANCET of March 21st, p. 825, the notes of the following case, which came under my immediate observation while I was house physician to St. George's Hospital, may not be without interest.

The patient was a man, aged 52 years, who was admitted to St. George's Hospital on Dec. 7th, 1895, suffering from carcinoma of the liver. His previous history was unimportant and his health had only begun to fail nine weeks previously. On admission the pinched aspect of the man and the yellowish pallor of his skin were very noticeable but there was no jaundice. The *abdomen* was protuberant and was specially enlarged in the upper part, where over the region of the liver irregular rounded projections could even be seen. There was a considerable amount of fluid in the abdomen. The liver was greatly enlarged, reaching fully two inches below the umbilicus. It was hard and was raised into a number of nodulated projections. The abdominal walls were covered with enlarged veins, especially marked in the flanks. The urine contained lithates but no bile or albumin. Emaciation and loss of strength were rapid but the pain was ver very severe. By Dec. 26th the abdomen was so dis-nded with fluid and the breathing had become so embar-ssed that paracentesis was performed and ten pints of llow milk-like fluid were removed, but without any very eat relief, and the man died six days later.

The fluid removed was yellow in colour and of a milk-like aracter; it had a specific gravity of 1018 and gave an kaline reaction. On standing a pinkish gelatinous clot was rmed. Microscopically the fluid showed the presence of a rge amount of fat in the form of an emulsion and also merous cells containing fat in their interior. When shaken o with ether, fat was dissolved out and the ether left a reasy stain when dropped on paper.

At the necropsy, when the abdomen was opened, three nts of milky-looking fluid were found in the peritoneal vity. There was no peritonitis. The glands in the esentery were welded together with new growth and there as a large mass of growth behind the stomach almost ncircling the aorta. The liver, together with some masses f glands, weighed 13 pounds. It was full of firm growths he form of rounded lumps rising the size of erine oranges. On the surface they wer slightly ed from contraction. There was very little liver sub-e left uninvaded by growths. The left pleural cavity half full of chyliform fluid similar to that in the men. The right pleural cavity contained a similar nt of clear serum. With regard to the fluid in the men, no special leakage could be discovered, but the ptaculum chyli and thoracic duct must have been impli-d by growth which was very extensive in front of the and second lumbar vertebræ. No special cause could be d to account for the milk-like fluid in the left pleura. oscopically the growth was a spheroidal-celled carcinoma.

ecster.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

> lla autem est alia pro certo noscendi via, nisi quamplurimas et orum et dissectionum historias, tum aliorum tum proprias ctas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus.* ., lib. v., Proœmium.

BATH ROYAL UNITED HOSPITAL.

ASE OF ACUTE ENTERIC INTUSSUSCEPTION CAUSED BY THE INVAGINATION OF MECKEL'S DIVERTICULUM; OPERATION; RECOVERY.

(Under the care of Mr. H. G. TERRY.)

FOR the notes of the case we are indebted to Mr. J. Beattie nlop, house surgeon.

A schoolboy, aged 12 years, was admitted into the Bath yal United Hospital on Dec. 16th, 1902, at about 9 P.M. he history of the case was that the boy had been quite well n that day until noon when he made a hearty dinner, but uring it was seized with some abdominal discomfort. He eturned to school at 1.30 P.M., but while there he had such ere attacks of pain in his abdomen that he was sent home. re his pain was thought to be due to indigestion and he s given peppermint water. As his condition did not im-ove Mr. E. L. Hunt, of Sherston, was sent for and he arrived out 4 P.M. He found the boy crying from pain and rolling om side to side. The patient's temperature was 96·5° F. d his pulse was 60. His pain was found to be most acute low and to the right of the umbilicus and there a sausage-aped tumour could be palpated three or four inches long d running up towards the liver. He had been vomiting rtially digested food and had passed a loose watery motion ntaining blood. Mr. Hunt diagnosed acute intussusception l sent him straightway to hospital—a drive of over 18 les.

On admission the boy's facies was not anxious. From e to time he had bouts of pain which were referred to region below and to the right of the umbilicus. His nperature was 99° and his pulse was 60 and small in lume. The abdominal wall was slack and moved with piration. There was very little distension. On palpation a sausage-shaped tumour was to be felt extending from the right iliac fossa to the right subcostal margin. It was firm, moveable, growing harder during the paroxysms of pain, and varying in size from time to time. Manipulation tended to make it smaller. Per rectum a tense swelling could be found in the right iliac fossa. Mr. Hunt's diagnosis was corroborated and operation was decided on at once.

The abdomen was accordingly opened to the right of the median line by Mr. Terry and an intussusception of the ileum forthwith presented itself. The tumour was 12 inches in length; it was tense, shining, cherry-red in colour, and the mesentery was twisted. Reduction was effected gradually and it was then seen that the intussusceptum was black in colour and that there was free fluid between the middle and internal layers. The blackness was dispelled gradually as reduction proceeded. At the end of the reduction, however, the apex of the intussusceptum gave way and was then found to consist of Meckel's diverticulum. The diverticulum was almost six inches in length and was swollen to the diameter of the small bowel, invaginated, and sloughing. Its invagination had evidently caused the intussusception of the ileum. This troublesome appendage was thereupon amputated at its junction with the bowel and the edges of the opening thus left were brought together by means of two layers of Lembert's sutures. The abdomen was then sewn up layer by layer. The boy bore the operation exceedingly well. On the next day he passed blood and flatus three times, and thenceforth made steady progress, his recovery, however, being somewhat delayed by the skin giving way, though the rest of the abdominal wall held well. He was discharged cured on Feb. 6th.

Remarks by MR. DUNLOP.—The above case is of interest from its bearing on the etiology of enteric intussusception. I must express my thanks to Mr. Terry for his kind permission to record this case, and to Mr. Hunt for the exceedingly good history which he sent us of it.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Acromegaly.—Bilharziosis.—Surgical Treatment of Gangrenous Bowel in Herniotomy.

A MEETING of this society was held on March 27th, Mr. HOWARD MARSH, the President, being in the chair.

Dr. H. A. LEDIARD (Carlisle) read a paper on a case of Acromegaly and Goitre. The patient was a woman, aged 43 years, who was born and had always lived in Cumberland. She had had amenorrhœa and headache dating from the last confinement, ten years previously. The features were characteristic, especially the lips, nose, lower jaw, and tongue, as were also the speech and expression of the face. The thorax was large, the ribs being massive and the hands being broadened. Sugar had been at one time present in the urine. For some years a bilateral goitre had been evident, but in June, 1902, the patient was sent to the Cumberland Infirmary for operation on account of dyspnœa with stridor and dysphagia due to pressure. The left side of the goitre was then removed and all these symptoms were relieved. The patient was exhibited to the society and her feeble muscular power was demonstrated. Radiographs of the hands and other parts were exhibited, together with the goitre which had been removed and microscopic slides. The usual features of acromegaly not present in this case were kyphosis, bi-temporal hemianopsia, sweating, and cyanosis. There was no trace of the general increase in size sometimes present, but the features of the face and the limbs were so greatly enlarged that the patient could not be recognised by her relatives and the muscular power was feeble.—Dr. W. PASTEUR asked whether the operation had in any way modified the character of the acromegalic condition.—Dr LEDIARD, in reply, stated that there had been no change in the pulse or temperature since the operation, but the patient had gained several pounds in weight.

Dr ANDREW DUNCAN read the notes of a case of Bilharziosis. The patient was a man, aged 30 years, lately in the 2nd Battalion East Kent Regiment. He had been fighting in the Orange River and Cape Colonies and was in Lord Roberts's march to Pretoria. In May, 1902, he began to itching at the end of the penis and a frequent desire to urinate, with great straining, but had at this time no hæmaturia He also had a lump in the left groin and great pain in the lower part of the back. The lump after rest went away. He returned to England in June, 1902, and on arrival first noticed a small clot of blood in his urine. Previously to the appearance of this he had severe pain and burning in the urethra. In July, there being a decided increase in the hæmaturia, he went into a country hospital and was there sounded for stone and examined by the Roentgen rays. During this time also growths appeared around the anus, for which mercury was prescribed on the supposition that they were specific. In January, 1903, the case was seen and at once recognised as one of bilharziosis by Mr. James Cantlie who sent him to the Branch Seamen's Hospital, where he was admitted under the care of Dr. Duncan. On admission the patient was anæmic and the urine contained blood, mucus, a small amount of albumin, and numerous ova of bilharzia. In the perineum there was a slight swelling over the raphé which disappeared after being fomented. There were three growths round the anus; one was conical and about half an inch in diameter and the other two were flattened with broad bases of half an inch. These on removal were seen to be papillomatous swellings stuffed with the ova of the bilharzia. The fæces passed by the patient were found to contain ova. There were no evidences of any growths in the rectum as far as the finger could reach. With regard to the ova passed by the rectum, according to Lancarol's teaching, the spines of these when occurring in the intestinal veins were always lateral, in contra-distinction to the terminal spines of the ova in the vesical veins. This, however, was not an invariable rule. Lieutenant P. S. Lelean, R.A.M.C., in his paper read last year before the Medical Society of London, stated that he had found rectal ova with terminal, and vesical ova with lateral, spines. In the treatment of this disease great difficulty had always been experienced; Dr. Guillemard went so far as to say that all treatment was useless. However, Lieutenant Lelean [illegible] drawn attention to the great benefit exercised by methy- [illegible] blue given in four-grain doses three times daily. He had [illegible] that ova died in less than 15 minutes when the stain [illegible] run under the cover glass. Dr. Duncan's patient had [illegible] treated according to Lieutenant Lelean's directions, but up to the present time there had been no appreciable difference in the amount of the hæmaturia; the deposit in the urine glass seemed less, but the colour of the urine was the same. For the first few days after his admission and before the methylene blue was administered the patient had been given tabloids of suprarenal extract but without any effect. Dr. Duncan now proposed to try liquid extract of male fern, as suggested by Mr. H. M. N. Milton of Cairo.—Dr. PATRICK MANSON remarked that condylomatous growths outside the anus were quite unusual, though internal growths were frequent in the rectum. The growths in the skin on the outside of the thighs in this case were also unusual; these also probably contained bilharzia. The lumps in the perineum were met with occasionally and their occurrence should be remembered by surgeons. The deposit of bilharzia at a distance from the normal habitat of the parasite was an interesting fact. Dr. Manson endorsed the statement that the bilharzia ova discharged from the bladder usually presented a terminal spine, though in certain cases the ova discharged from the rectum presented a lateral spine. He was inclined to believe that these two kinds represented two different species of the parasite. Treatment was most unsatisfactory and any new suggestion was an advantage.—Dr. W. P. HERRINGHAM, referring to the source of infection, asked why in bathing the worms should get into the portal vein.—Dr. PASTEUR asked what was the usual prognosis in this disease and referred to a case which had been sent to him as a case of renal calculus in which the patient eventually made a complete recovery without any special treatment.—Dr. H. BATTY SHAW remarked that the Boers in some districts of South Africa were well aware that the drinking of the water of certain streams was sure to produce bilharziosis.—Dr. DUNCAN, in reply, remarked that lateral spines had been found in bilharzia from the bladder. He believed that the disease was produced by drinking water which was contaminated. He had not yet seen a case in which treatment did any good.

Mr. G. H MAKINS read the notes of two cases illustrating the employment of Invagination and Stitching over Gangrenous Patches of Intestine in the Treatment of Strangulated Hernia. The first case was that of a man, aged 87 years, who for 16 years had been the subject of an irreducible right inguinal hernia. The patient was admitted to hospital 20 hours after the signs of strangulation had become marked. He was then in considerable pain, vomiting occurred at intervals, and the bowels were confined. The scrotum was red, tender, and considerably swollen. A herniotomy revealed a sac containing a quantity of red stinking fluid, six inches of small intestine with a small gangrenous patch perforated in the centre, and a single apple-pip free. The small gangrenous patch was inverted by the passage of four Lembert's sutures, the bowel was cleansed, the neck of the sac was removed, and the bowel was returned within the abdomen. No attempt was made to close the wound but this was plugged with gauze. The wound granulated up and the patient left the hospital cured after an uneventful course on the forty-eighth day. The second case was that of a male infant, aged nine weeks, an ill-nourished illegitimate child, the subject of congenital syphilis, in whom a small partial enterocele in a state of gangrene was found to exist. Two cases were also mentioned in which "doubtful" rings of gut had been stitched over and a third in which a gangrenous patch had been inverted successfully. The first case (that of the old man) was admitted to belong rather to the category of an intestinal perforation than to that of gangrene, but the second was an example of an ordinary gangrenous partial enterocele, and it was claimed that the method of treatment adopted could not safely have been replaced by any other. The opinion of Mr. W. Watson Cheyne and Mr. F. F. Burghard was quoted in favour of the adoption of the method of invagination in cases in which the condition of the gut was doubtful; reference was also made to some cases published by Professor C. J. Breitmann in which inversion of gangrenous patches was successfully carried out. The opinion of Professor Graser condemning the method as dangerous was also quoted, but Mr. Makins urged the value of the method in all cases where there was reason to believe the gangrene to be local and unaccompanied by diffuse infective inflammation of the bowel beyond. He also claimed that it was applicable to some cases in which resection could not be performed with safety to the patient as in the two instances which formed the subject of his communication.—Mr. L. A. DUNN referred to two cases of strangulated hernia which had been reduced *en masse*, in which similar pathological conditions had been successfully dealt with by this method. Another case, that of a boy, had been thus treated, but the boy died accidentally from suffocation. In a fourth case no harm had resulted by leaving the gangrenous spot of bowel.—Mr. A. A. BOWLBY remarked on the frequency with which some surgeons met with cases requiring resection of the bowel. His own experience was that such cases were few in number. There were, however, a certain proportion, especially cases of femoral hernia, which might be best dealt with by bringing together the peritoneum over the gangrenous or partially gangrenous bowel. For some years he had adopted this method rather than more extensive resection.—Mr. C. H. GOLDING-BIRD referred to the appearance of the gut in the first case mentioned by Mr. Makins, in which the resiliency of the bowel was lost. This appeared to him to be a most important point.—The PRESIDENT hoped that Mr. Makins's paper would do away with the too free resection of the intestine which was the practice of some surgeons. He had often adopted the practice advocated by Mr. Makins, especially in femoral hernia.—Mr. MAKINS replied.

OPHTHALMOLOGICAL SOCIETY.

Anophthalmos and Microphthalmos in a Chick.—The X-Rays in Trachoma.—Injuries to the Eye of the Child during Labour.—Dislocation of the Eyeball.—Exhibition of Cases and Specimens.

AN ordinary meeting of this society was held on March 13th, Mr. W. LANG, acting President, being in the chair.

Mr. E TREACHER COLLINS and Mr. J. HERBERT PARSONS communicated a paper describing the Microscopic Appearance of Sections through the Orbits of a Chick in which the right eye appeared to be congenitally absent and the left eye was abnormally small. In the right orbit a ring of hyaline cartilage, like that of the sclerotic, was found inclosing partly pigmented tissue, similar to that of the choroid There was no lens, retina, pigment epithelium, or optic nerve; there was thus a complete failure in development of all structures derived from neural epiblast. The essential element of an eye was a nervous mechanism which served to receive visual sensations for transmission to the brain. [illegible] ompletely absent the condition [illegible] as one of anophthalmos, not- [illegible] some of the subsidiary struc- [illegible] st. As far as Mr. Collins and Mr. Parsons had been able to ascertain, there was no case of congenital absence of the eye in which it had been satisfactorily shown by microscopical examination that the mesoblastic structures were entirely absent On the left side the chick had a microphthalmic eye in which the lens had failed to become separated from the cornea The capsule of the lens was adherent to the substantia propria of the cornea, [illegible] p. The adhesion [illegible] is ; above it had [illegible] surface of the lens ; below its growth had become arrested.

Mr. M. S. MAYOU (Cricklade) read a paper on the Treatment of Trachoma by the X Rays. The idea first occurred to him when treating rodent ulcer and lupus of the eyelid, on finding that no serious damage was done to the globe. The first case cured in this way was shown by him last June; since then several others had been successfully treated. The histological changes in living tissues exposed to the action of the x rays were then described, the most important change being a superficial irritation capable of being increased and accelerated by the simultaneous application of other irritants, such as copper sulphate. Most of the resulting leucocytosis was found around the trachoma nodules and the cells of rodent ulcer after x-ray treatment of these diseases, the reason for this being that they similarly acted as irritants. It was next pointed out that with care the amount of reaction produced could be regulated and that the varying degrees of reaction might be compared with the first three degrees of burns described by Dupuytren. Cases of prolonged exposure of the globe to the x rays were then instanced where the only bad effects produced, and those only temporarily, were falling out of the eyelashes and conjunctivitis ; this latter trouble was also found amongst workers in the x rays, and in them it could be prevented by the use of lead glass spectacles. Mr. Mayou found, with Fuchs and Kreidl (1896), that there was no bleaching of the visual purple by the x rays ; his experiments were carried out on rabbits and frogs. The results of treatment by the x rays were then compared with those produced by copper sulphate, jequirity, and other irritants and it was pointed out that there were less destruction of tissue and subsequent cicatrisation, as well as less pain, with the former method. The technique of the treatment was then described. The eyelids were everted (the operator's hands being protected by bismuth ointment and cotton gloves) ; the cornea was only exposed in severe cases where pannus was present. Owing to the infiltration set up difficulty was found in deciding when treatment should cease. Out of nine cases five remained well, one cleared up but recurred two months later, two others improved and were still under treatment, and in one case of corneal opacities following trachoma the vision had improved from perception of light to counting fingers at three feet. The advantages of this treatment were: (1) there was less resultant deformity of the lid ; (2) it was painless ; and (3) pannus cleared more thoroughly. The disadvantages were: (1) all patients did not react well to the x rays; and (2) it was sometimes difficult to tell when treatment should cease. Lantern slides of the histological changes produced by the x rays were shown and also two patients who had been cured by this treatment.—Remarks were made by the PRESIDENT, Mr. L. V. CARGILL, and Mr. S. STEPHENSON, the latter having seen the best results from the use of high-frequency currents which he had used somewhat extensively.

Dr. W. ERNEST THOMSON and Dr. LESLIE BUCHANAN (Glasgow) communicated some of the clinical and pathological observations which they had made upon Injuries to the Eye of the Child during Labour. After indicating the scope of the work done in this connexion Dr. Thomson gave a summary of the lesions in the 12 cases observed. These comprised expulsion of the eyeball, proptosis, injuries to the cornea, hæmorrhages into various parts of the eye, and retroversion of the lens and vitreous body without rupture of the globe. Dr. Buchanan described in detail three cases of lesion of the cornea—namely (1) rupture of the posterior elastic lamina with involvement of corneal tissue (healing); (2) rupture of the posterior elastic lamina and corneal tissue (unhealed); and (3) rupture of the posterior elastic lamina with abrasion. The points of similarity and difference were briefly explained. The identity of those cases of rupture of the posterior elastic lamina and corneal tissue with the cases already described as traumatic keratitis with linear opacity[1] from a clinical standpoint was pointed out and the etiology of other corneal opacities seen at birth was discussed. Remark was made upon the very unusual injury, retroversion of the lens and vitreous body, and the nature and origin of the case were somewhat fully explained. In conclusion, the subject of traumatic exophthalmos was dealt with and allusion was made to the connexion between it and the localised indentation of the cranial bones due to pressure against the sacral promontory. The subject was illustrated by macroscopic and microscopic specimens and diagrams.

Mr. J. B. LAWFORD read notes of a case of Complete Dislocation of the Eyeball forwards, occurring in a child, aged seven years, as the result of a fall against an iron fender. Reduction was easily effected under chloroform and recovery ensued with no defect of sight and no limitation of movements of the eyeball. Slight proptosis was noticeable for one month after the accident but no restriction of ocular movements could be detected even three days after the reduction of the dislocation.

The following card specimens were shown:—

Dr. BUCHANAN: (1) Separation of the Ciliary Body; and (2) Congenital Mal-development of the Cornea and Sclerotic.

Mr. MAYOU: Two drawings of the Normal Fundi, illuminated by the mercury vapour lamp.

Mr ARNOLD LAWSON: (1) A case of Paralysis of the Ocular Fibres of the Cervical Sympathetic with Aortic Disease; and (2) a case of Chronic Irido-cyclitis (probably Sympathetic) following a Rupture of the Globe 21 years previously.

Dr. THOMSON and Dr. BUCHANAN: Preparations illustrating the Effects of Injuries to the Eye of the Child during Labour.

Mr. W. H. JESSOP: Tumour in the Macular Region.

Mr W. W. SINCLAIR and Mr. J. H. PARSONS: Endothelioma of the Cornea.

Mr. R. W. DOYNE: (1) Melanotic Carcinoma of the Upper Lid with Pigmentation in the Lower Lid; and (2) Intraocular Hæmorrhage in a young man.

Mr. G. H. GOLDSMITH (Bedford): Hole in the Macula.

Mr. N. BISHOP HARMAN: Connective Tissue veiling the Optic Disc.

HUNTERIAN SOCIETY.

Exhibition of Cases.

A MEETING of this society was held on March 18th, Dr. STEPHEN H. APPLEFORD, the President, being in the chair.

Dr. F. J. SMITH showed a case of Multiple Lipomata. The patient was a man, aged 60 years, who first came under notice in September, 1901, for pain in the region of the heart which had been present on and off for a year. He had lost two stones in weight and complained that solid food produced great pain. The abdomen was rigid and the liver was slightly enlarged and tender. The case was diagnosed as one of probable malignant disease of the stomach, but the patient improved very rapidly under treatment by bismuth and opium. He was again seen in February, 1902, still complaining of some pain in the lower chest on the left side and there was then found to exist an obscure nodular swelling just below the ribs. Diagnosis was still obscure and the case was still watched with some interest. By May extensive subcutaneous growths had appeared above the clavicles and on the ribs and arms with signs of obstruction of the deep veins—enlargement of the subcutaneous veins of the chest—but he again improved very much under bismuth and opium and the arms diminished in circumference by four inches. About the same time he had an attack of profuse melæna, after which he was much better, and in July nothing was to be felt in the abdomen. He was not seen again till January or February, 1903. For the above notes on his history Dr. Smith was indebted to the kindness of his colleague, Dr. R. Hutchison. On the patient's admission to hospital the only other point of interest ascertained was that he suffered from free epistaxis in association with the strain of vomiting. On admission to hospital in March, 1903, his state was as follows. He was apparently a fairly well-nourished man; superficial examination showed that above the clavicles and on both upper arms there was a diffuse and profuse growth of what felt like subcutaneous fat; on both forearms there were lumps varying in size from that of a walnut to that of a golf ball, with an elastic semi-fluctuating feel, freely moveable on the muscles but incorporated with the corium; in fact, with all the physical signs usually associated with multiple and diffuse lipomata. The thighs presented a similar but much less marked condition than the upper arms. On the tendons of the wrist and on the tendon of the rectus femoris on each side there were one or two small lumps more firmly adherent to the tendon sheaths. On the left first rib at its junction with the sternum and over the right pectoralis major were one or two lumps of a much firmer consistency, feeling very suspiciously like glands infiltrated with some form of growth. The veins on the left side of the chest in front were rather more prominent than was usually the case though not sufficiently so to suggest serious blockage of large deep veins. Examination of organs gave no indications of disease, the air entered both lungs freely to the base without adventitious sounds or alteration of the natural ones; the heart beat was regular in rhythm and the sounds were satisfactory; and in the abdomen there was nothing to be felt that could be called abnormal unless it was a little tenderness to palpation in the upper abdomen generally. Dr. Smith gave the above details, or rather called the attention of the Fellows to the above points, and then considered the diagnosis. He stated that in his opinion there could be no doubt that the majority of the lumps were lipomata, but he was in doubt whether there were not also some glandular involvements; he hoped to be able to persuade the patient to allow one of the quasi-glandular lumps to be removed for microscopic examination. His suspicions were especially aroused by the history of gastric trouble, though he thought this might perhaps depend upon a chronic ulcer. He drew attention to the absence of any history of previous stoutness of the patient, a history which was commonly present in cases of multiple lipomata. He promised a further communication any new facts in the case.

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[1] Transactions of the Ophthalmological Society, vol. xxii.

Dr. SMITH also showed a case of Leucocythæmia. The patient was a man, aged 32 years. His illness began in 1901 with a continued drowsy and sleepy feeling; he then noticed that his abdomen was swelling and that he got short of breath He was then told that his spleen was enlarged. He was admitted to hospital under the care of Dr. Smith in July, 1902, was treated with arsenic, and was discharged improved in September with a blood count showing—white corpuscles 171,600, red corpuscles 2 000,000, and hæmoglobin 45 per cent. He was readmitted to hospital on Feb. 21st, 1903, with loss of energy, shortness of breath, and swelling of the eyelids and ankles. He gave a history of hæmorrhage from the gums with attacks of faintness and giddiness; he had also cramps in the muscles. A blood count showed—white corpuscles 320,000 and hæmoglobin 50 per cent.; a stained film showed some poikilocytosis of the red cells and a few nucleated ones with every described variety of white cell with a preponderance of transitional forms; many blood platelets, in clumps and singly, were also present. The fundi oculorum showed no pathological changes of any kind. The spleen reached from the diaphragm to the pelvis. Dr. Smith remarked that the case showed no especial features of its own, but he had brought it as an example of a somewhat uncommon disease He was having a research carried out upon the uric acid in the urine by Dr. MacLeod in the Pathological Institute of the London Hospital.

Dr W. H. KELSON showed a man suffering from Ulceration of the Epiglottis, Inter-arytænoid Fold, and both Vocal Cords. Tubercle bacilli were present in the sputa. There were evidences of slight changes in the lungs. The patient complained chiefly of pain on swallowing, which had been markedly relieved by orthoform insufflations. He had also been getting hoarse for about a month. Dr Kelson, in replying to questions, said that orthoform powder had proved of great value in the relief of pain attending tuberculous ulceration.

Dr. T. GLOVER LYON showed a case of "Cured Phthisis." The patient was a girl, aged 11 years She was said to have had a cough with slight expectoration for two months, occasional slight spitting of blood, and had "wasted shocking." On admission to Victoria Park Hospital she was very thin, with shiny skin and pasty complexion, looking very ill. The physical signs were much the same as described later except that the heart's apex beat was normal in position. The patient rapidly improved in general condition and in eight weeks her weight increased from 4 stones 4 pounds to 5 stones 1 pound, an increase of 16 per cent. After two months in hospital the physical signs were as follows: the chest was well formed, moving slightly less on the left than on the right side; in front there was dulness and much increased resistance over the lung area above the heart, the apex beat of which was in the fourth interspace. There was tubular breathing with metallic (dry) crepitations. There were increased vocal resonance and decreased vocal fremitus. Behind there were slight dulness, metallic crepitations, and increased vocal resonance and vocal fremitus over the upper half. Cough and expectoration had entirely ceased and the child looked happy and well. The expectoration had ceased soon after admission and no examination of it had been made, but there was no doubt about the tuberculous nature of the disease The temperature had shown a tendency to rise from time to time up to 101° F., but the child had been allowed to get up without apparently any effect upon these rises of temperature.—Dr. SMITH, Mr. W. HARRIS BEST, Dr. W. H. KELSON, Mr. A. W. GALLOWAY, Dr. W. RAWES, and Mr. JOHN ADAMS discussed the cases.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

A CLINICAL meeting of this society was held on March 20th, Mr. JOHN IRVING, the President, being in the chair.

Mr. J. G. E. COLBY showed a lad with Transposed Viscera

Dr. E. WARD exhibited two cases of (?) Molluscum Fibrosum

Dr. T. CHURTON showed: 1. A woman, aged 39 years, who had been under Anti-syphilitic treatment since December, 1901. At first the subclavian arteries, especially the left, were thickened and greatly dilated, the pulsation being visible above the inner and below the outer part of the clavicle. The carotids were similarly but less affected and pulsation was felt behind the manubrium. All these arteries now appeared to be perfectly normal. The other signs of syphilis had disappeared. Diffuse arteritis in an early stage was apparently as curable as diffuse syphilitic hepatitis in an early stage. 2. A woman, aged 49 years, with Aortic Aneurysm pulsating in the second left intercostal space. A systolic bruit was audible at the margin of the sternum, in the second interspace, and also over the trachea. 3. A case of Glycosuria of uncertain origin in a man, aged 56 years, in which "renal diabetes" had been excluded by *finding* an excess of sugar in the blood by Williamson's test.

Mr. W. H. BROWN showed some Results of Plastic Surgery.

Dr. J GORDON SHARP showed: 1 A man, aged 40 years, exhibiting Infiltration of the Soft and Hard Palate, Epiglottis, Inter-arytenoid Region, and Ventricular Bands, probably tuberculous in nature, although no bacilli were found in the sputum. The condition had greatly improved under the local application of 75 per cent. lactic acid. The same patient also showed great hypertrophy of the lingual tonsil causing no inconvenience and untreated. Six months previously he had pleurisy. 2. Three cases of Vaso-motor and Trophic Disease treated for some weeks with dried adrenal gland and cod-liver oil. During the past month five grains had been given twice a day. Case 1 (that of a girl, aged 13 years) was one of true Raynaud's disease, showing remnants of necrosis of the soft parts of the fingers and toes. Last winter the girl had to be confined to bed on account of the sores. Under the present treatment she had this winter been able to move about and to do household work; all saving one sore on the toe had healed. Case 2 (that of a girl, aged 11 years) was considered to be one of severe "broken" chilblain with large areas showing local asphyxia The sores had nearly all healed and the nutrition of the skin and parts in general had improved. Case 3 (that of a girl, aged nine years) was one of doubtful Raynaud's disease showing the results of malnutrition of the nails of the *fingers and toes, sores of the soft parts, areas of asphyxia,* and glossy skin. Although on first consideration a substance like adrenal gland which contracted vessels would appear to be contra-indicated in local syncope, yet, as suggested by Dr A Mantle, the agent might act beneficially by raising the blood pressure

Mr H **LITTLEWOOD** showed ten cases of Acute Perforated Gastric Ulcer which he had successfully operated on during the last seven years. In all the cases the perforation was in the anterior wall of the stomach and nearer the lesser than the greater curvature. The quantity of extravasated material varied from a general flooding of the peritoneal cavity to a small amount in the region of the ulcer and hypochondriac regions. Case 1 —The patient was a young woman, aged 18 years. Operation was performed on May 2nd, 1896, seven hours after perforation. Much extravasation was present The ulcer was excised and the stomach opening was closed with interrupted silk sutures. The abdomen was drained Case 2.—The patient was a young woman, aged 18 years Operation was performed on July 21st, 1896 six hours after perforation The ulcer was excised and the opening in the stomach was closed with interrupted silk sutures Much extravasation was present The abdomen was drained. Case 3 —The patient was a single woman, aged 28 years. Operation was performed on April 11th, 1899, five hours after perforation. The ulcer was excised and the stomach was closed with interrupted silk sutures. There was not much extravasation The abdomen was closed without drainage. Case 4.—The patient was a single woman, aged 28 years Operation was performed on Dec. 11th, 1900, five hours after perforation The ulcer was excised and the stomach was closed with interrupted catgut sutures. The abdomen was closed without drainage Case 5 —The patient was a single woman, aged 24 years Operation was performed on Sept. 11th, 1902, about 24 hours after perforation The ulcer was excised and the stomach was closed with a continuous catgut suture Extravasation was limited to the upper part of the abdomen The abdomen was closed without drainage. Case 6 —The patient was a single woman, aged 24 years, Operation was performed on Oct. 25th, 1902, about 18 hours after perforation. The ulcer was excised and the stomach was closed with a continuous catgut suture A good deal of extravasation was present. The abdomen was drained Case 7.—The patient was a single woman, aged 20 years Operation was performed on May 15th, 1902, about 14 hours after perforation. The ulcer was excised and the stomach was closed with a continuous catgut suture There was much extravasation The abdomen was drained. Case 8.—The patient was a single woman, aged 23 years. Operation was performed on Feb. 26th, 1903, about ten hours after perforation. The ulcer was excised and the stomach was closed with a continuous catgut suture There was not much extravasation. The abdomen was closed without drainage Case 9 —The patient was a young woman, aged 19 years Operation was performed on March 1st, 1903, eight hours after perforation The ulcer was excised and the stomach was closed with a continuous catgut suture Not much extravasation was present The abdomen was closed without drainage Case 10 —The patient was a young woman aged 18 years Operation was performed on March 16th, 1903 The ulcer had perforated on March 12th There was very little extravasation, as the stomach around the perforation was adherent to the under surface of the liver The ulcer was excised and the stomach was closed with a continuous catgut suture The abdomen was closed without drainage

Dr. T. **WARDROP GRIFFITH** showed (1) Cases of Raynaud's Disease; (2) a case of Cerebral Diplegia; and (3) an extensive Rodent Ulcer which had undergone complete cicatrisation under the use of the x rays during five months

Mr. A L. **WHITEHEAD** showed: (1) A case of Traumatic Ocular Paralysis; (2) a case of partial Embolism of the Central Artery of the Retina; and (3) a case of Detachment of the Retina

Dr. **DOUGLAS SEATON** showed: (1) Two cases of Congenital Syphilis; and (2) a case of Malignant Disease of the Floor of the Mouth

Mr. H R. **BEALE** showed a case of Lesion in the Middle of the Pons There was palsy of the left internal rectus for conjugate deviation to the right, but not for convergence; the pupils were normal. The superior obliques were normal Sensation in the face was normal Paralysis of the muscles of mastication, palsy of both external recti (greater on the right), and facial palsy were present, and deafness existed on the right side. The remaining cranial nerves were normal Palsy, incoördination, and numbness of the right arm and hand were present There was increase of reflexes on the right side The patient suffered from headaches and vomiting.

Mr. R **LAWFORD KNAGGS** showed a patient in whom the Great Sciatic Nerve had been severed six years ago by a Crowbar that had transfixed the thigh The nerve had been sutured on the following day. The patient could walk without a noticeable limp but sensation over the lower part of the leg and foot was still very imperfect Considerable improvement had taken place during the last two years and was continuing

Dr. E F. **TREVELYAN** showed: 1. A series of cases of Laryngeal Affections in Phthisis among which were (*a*) a lad with a fixed left cord, enlarged glands in the neck, tubercle bacilli in the sputum, and no definite abnormal signs in the chest, (*b*) a man with persistent hoarseness and no obvious change in the larynx; and (*c*) a man with laryngeal obstruction due to infiltration of the ventricular bands. 2 A case of Tabes Dorsalis of long standing in a man who had worn a shade for many years on account of diplopia. Removal of the shade caused a great increase in the ataxia altho [illegible] Mark [illegible] taken [illegible] by a [illegible]

Dr S M. **HEBBLETHWAITE** showed a case of Trichocephaliasis

LIVERPOOL MEDICAL INSTITUTION.

Pathology of Progressive Muscular Atrophy.—Acute Intussusception with Ulceration of the Intestine —Exhibition of Specimens

A MEETING of the Pathological and Microscopical Section of this society was held on March 26th, Dr. R J. M. **BUCHANAN** being in the chair.

Dr A. W **CAMPBELL** gave an account of the histology of two cases of Progressive Muscular Atrophy and made special [illegible] to changes in the Cortex Cerebri In both instances [illegible] s, the spinal cord, and the [illegible]: in both also a serial exa[illegible] in the whole of its extent revealed the remarkable fact that in the part of the ascending frontal gyrus and paracentral lobule which an examination of healthy brains proved to be the normal residence of the giant cells of Betz scarcely any of these elements were to be discovered, and their disappearance was associated with a general distortion of the cells which remained, atrophy of efferent fibres, and distension of cortical blood-vessels The ascending parietal and other neighbouring convolutions were relatively healthy. The view that the spinal changes in progressive muscular atrophy were primary was rendered unstable by the findings in these two cases, because from an experience of the cortical alterations in instances of interference with the system of motor neurons at a lower level (cases of myelitis and amputation) it was idle to suppose that a complete retrograde destruction of the cells of Betz could occur during the progress of a disease which usually did not last more than three years The alternative views mentioned were that either the cortical changes were primary or else in progressive muscular atrophy an expression could be seen of a general and more or less simultaneous affection of the whole system of motor neurons The fact that the alterations were entirely confined to the area of distribution of the cells of Betz gave support to the view previously expressed by Dr. Campbell on histological grounds that in man the topography of the motor area was analogous to that which Professor C S Sherrington and Dr A. S. F Grunbaum had defined in the anthropoid ape; further since sensation was unimpaired in cases of progressive muscular atrophy, the changes noted could be used as an argument against the theory of the mixed sensori-motor function of the central convolutions The paper was illustrated by drawings and microscopic sections and in one of the latter an abundance of muscle spindles was seen remaining in an extremely atrophied muscle, an appearance which strengthened the view that these bodies were concerned with muscle sense.—Dr. W. B **WARRINGTON** considered that Dr Campbell had made an important addition to the pathology of this disease since the complete disappearance of the Betz cells had not previously been described. It was recognised that the anatomical changes in the great cortico-spinal efferent tract were found most extensively marked in its peripheral distribution and were not often seen in the higher cerebral regions This, however, did not imply a peripheral origin but indicated that the anatomical change first appeared in the position most remote from the trophic centre. Etiologically no toxic influence had been traced and the view appeared probably correct that the disease was primarily due to some inherited lack of durability and unusual stress on the motor neuron. Such considerations also led to the acceptance of the view that the disease first began in the great pyramidal cells. Dr. Campbell's demonstration of the integrity of the muscle spindles was also important —Dr GRUNBAUM and Dr. J. WIGLESWORTH also spoke and Dr. CAMPBELL replied.

Dr. LLEWELLYN A. MORGAN read a note on a case of Acute Intussusception in an Infant associated with Ulceration of the Intestine.—Mr. R. W. MURRAY said that the case was exceptionally interesting on account of the remarkable combination of the lesions. It was the only case of intussusception he had met with in which the invagination originated above the ileo-cæcal valve and it was the only case he had seen in which tuberculous ulceration of the gut had been the cause of the intussusception.

The following specimens were shown :—

Dr R. T. BAILEY : (1) Acute Plastic Pericarditis ; and (2) the Lower Jaw of a Child who had been the subject of congenital syphilis.

Mr. F. C. LARKIN : (1) Sections of a Carcinoma Mammæ densely Infiltrated with small Polynucleated Round Cells ; and (2) Adenomatous Tumour which filled the lower half of the antrum and invaded the nose, the palate, and the alveolus. Its structure was that of a simple mucous gland.

Dr. WARRINGTON : Specimen and Sections from a case of Collapse of the Lung, Bronchiectasis, and Gangrene after Pneumonia.

Dr. E. T. DAVIES : Fibroid Tumours of the Uterus

Mr. G. G. HAMILTON : Microscopical sections from a Sarcoma originating in the Tendon Sheath of the Tibialis Posticus.

Dr. J. HAY : Specimens from a case of Actinomycosis. The patient was a girl, aged 15 years, the first noticed lesion was a submammary abscess. The disease at present affected the left lung and there were secondary foci in the brain, scalp, and skin of the extremities and trunk.

Mr. W. THELWALL THOMAS : (1) Carcinoma of the Kidney removed from a woman, aged 58 years ; it occupied the lower half of the organ ; the cells of the new growth were large and showed some melanosis (Mr. Thomas considered it adrenal in origin) ; (2) a Necrotic Clavicle following Osteomyelitis removed from a man, aged 24 years ; and (3) Tuberculous Disease of the Mammary Gland in which the axillary glands were enlarged but not tuberculous.

The following members took part in the discussion of the specimens : Dr. BUCHANAN. Mr. F. T. PAUL, Mr. K. W. MONSARRAT, and Dr. F. H. BARENDT.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Operative Treatment of Enlarged Prostate.—The Surgery of the Prostate.

A MEETING of this section was held on March 6th, Mr. L. H. ORMSBY, the President, being in the chair.

Sir WILLIAM THOMSON read a paper on the Operative Treatment of Enlarged Prostate. He read the notes of five cases on which he had operated, following the method described by Mr. P. J. Freyer. The patients' ages ranged from 53 to 75 years. One died from ether bronchitis and the others completely recovered. The results attained had been surprising and none of the patients, who had all suffered from retention and cystitis many times and had been using a catheter for varying long periods, had required any instrumentation since. In one case he had removed the prostate in a single mass, including the urethra. In the same case it had been necessary to plug the bladder some hours after the operation owing to hæmorrhage. He described a thin rubber oval disc which he had devised for such cases instead of the gauze plug, the removal of which was painful and disturbing. The disc had a long ligature carried through it and this was next tied to a catheter and brought out through the urethra. Traction made pressure on the site of the bleeding. A ligature carried through the rubber near the edge served for extraction when the bleeding had stopped. This rubber did not adhere, and as it was thin and was extracted edgewise there was no disturbance of parts and no anæsthetic was required.

Sir THOMAS MYLES read a paper on the Surgery of the Prostate, in which he advocated the perineal method of reaching the prostate.—Mr. A. B. MITCHELL said that the subject was one of great interest. He congratulated Sir W. Thomson on the success of his operation. The great questions for the general practitioner were : (1) When should operation be recommended? and (2) what was the prospect of relief? Undue frequency of micturition was due to cystitis and was the most imperative of all indications Rapidity of procedure was a most important element in all operations on old men. Every moment an aged patient was kept on an operating table was fraught with danger, and great danger. His own experience was in favour of the suprapubic route, but he was very favourably impressed with the operation described by Sir Thomas Myles and would like to have some statistics of cases actually operated on according to his method.—Mr. JOHN LENTAIGNE was in favour of the suprapubic method ; he had no experience yet of the perineal, but the suprapubic was so easy that he had been tempted to employ it in each of the few cases he had had an opportunity of operating on. He did not accept the statement that pneumonia after operation was always septic. He had often seen pneumonia of a severe type in other operations where the wound healed aseptically and in the most perfect manner.—Sir T. MYLES and Sir W. THOMSON replied.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on March 19th, the President, Dr. J. Robertson, being in the chair.—Dr. Arthur J. Hall showed a specimen of Cerebellar Tumour and gave an account of the case.—Professor C. J. Patten showed a series of models in wax and plaster illustrating the Topographical Anatomy of the Abdominal Viscera. The originals from which the models were made were first thoroughly hardened by formalin injected through the femoral artery. Most of the specimens were from adult male subjects in which no sign of visceral disease was apparent. The models exhibited were : (1) the kidneys and their relations to the vertebral column, lower ribs, and pleura ; (2) front view of the abdominal viscera seen on removal of the anterior abdominal wall ; (3) a wax model of all the abdominal organs on the reconstruction method ; (4) the pancreas, duodenum, and spleen, with the relations of the branches of the abdominal aorta and inferior vena cava ; (5) wax models of fœtal lungs (human), of lungs of the *Cynocephalus babuin* and of the *Hylobates hainanus ;* (6) a model in plaster of the entire trunk of *Hylobates hainanus*, showing the relations of the thoracic and abdominal organs, especially to the vertebral column ; and (7) another model of the same animal showing the form of the pancreas, duodenum, and spleen.—Dr. J. Robertson read a paper on an Outbreak of Typhoid Fever due to the Consumption of Oysters in Sheffield. Every year there had been from 20 to 30 more or less isolated cases of typhoid fever which possibly might have been due to the consumption of polluted oysters. On one or two occasions groups of as many as two or three cases appeared to have occurred from one oyster shop. As a general rule it was exceedingly difficult to be quite certain that the infection was derived from particular oysters. This arose firstly from the difficulty of tracing the source of the oysters, secondly from the fact that everybody who consumed oysters did not contract the disease, and thirdly from the fact that in towns where typhoid fever was endemic it was very difficult to trace the source of infection. The occurrence, however, of these isolated cases every year, many of which derived their oysters from one particular district, gave rise to suspicion that the oysters from at least one source spread typhoid fever. During last summer between August 14th and Sept. 18th 43 cases of typhoid fever were notified in Sheffield. This was a much smaller number than was usual at that time of the year. On examining these cases it was found that in no less than 20 of them patients had partaken of oysters from Cleethorpes within the previous 25 days. Oysters came directly from Cleethorpes layings to Sheffield, and in Dr. Robertson's opinion this was an important point. Oysters which were stored in clean water or even in shops lost their power of conveying the disease. In Sheffield there was every chance that the oysters from Cleethorpes were fresh. Most of the patients suffering were persons of the working class who had either been to Cleethorpes for a holiday or had bought Cleethorpes oysters in Sheffield or had had them sent from Cleethorpes. The period which elapsed between the consumption of oysters and the notification of the disease as typhoid fever varied up to 25 days—in the majority of cases the period varied between 10 and 15 days. Two of the cases were certified to be typhoid fever within seven days of the last occasion on which oysters were partaken of. In the well-marked outbreak at the Wesleyan University, Connecticut, the period varied from 13 to 33 days. After describing the oyster layings at Cleethorpes and quoting from the report of the Local Government Board Dr. Robertson described some of the other oyster layings and alluded to the difficulties which the oyster growers had in obtaining sites suitable for rearing oysters which were quite free from sewage pollution. He recommended that the profession should give warning against oysters until some guarantee was obtained of their freedom from all risk.

British Balneological and Climatological Society.—A meeting of this society was held on March 18th, Dr. E. Symes-Thompson, the President, being in the chair.—Dr. F. A. Mouillot (Harrogate), in introducing a discussion on Dietetic Factors in Health Resort Treatment, said (1) that a considerable portion of diseases treated at spas was due to faulty metabolism and that gout, obesity, and glycosuria were the chief of these diseases and were closely connected; (2) that gout in its widest sense was due to the development of certain poisons in the process of digestion and that these poisons were best limited by a simple meat dietary; (3) that it was irrational to consider food or drugs solely from the point of view of their acidity or supposed solvent power on uric acid; (4) that if the patient was properly dieted at home no marked change ought to be made in the diet at the spa, more particularly should the quantity of food not be restricted whilst undergoing a treatment which made a great strain on the activity of the system; (5) that the education which the patient received as to the regular consumption of non-alcoholic fluid apart from meals was a useful one; (6) that an attempt to treat obesity by withholding fluids was to be condemned as leading to the production of serious disease and ill-health and that though it was right to diminish the quantity of fluid taken at meals it was wrong not to make up for that limitation by giving water apart from meals; and (7) that alcohol should be taken in very limited quantities, if at all, and that in the case of gout whisky, still Moselle and still cider seemed least harmful.—Dr. Harry Campbell pointed out that for the long period which elapsed bef [illegible] learnt to cook his food and to till [illegible] ch were limited and subjected to [illegible] and insalivation that very small [illegible] passed into the stomach; whereas in this stage of abundant starch and imperfect mastication the stomach and intestines were flooded with undigested starch which gave rise to many evils.—Dr. Preston King (Bath) pointed out that while the Continental system of a more strict diet was suited for certain cases there were more for which it was not adapted, and he would be sorry to see it introduced here. Each case must, in dietary as in other things, be treated on its merits.—Dr. Léon Blanc (Aix-les-Bains), speaking specially of the diet in gouty cases, said that the diet regulations were not very strict in France because the ordinary food was comparatively light. He gave mixed diet, including meat, only twice a day, and preferably beef and mutton, which must be boiled if possible. Game, venison, pork, and preserved meat were forbidden. All vegetables were good, and fresh fruits, especially acid fruits, were taken between meals. Alcohol must be proscribed. Pure water (Massonat water) should be given with a little white wine or lemon-juice, &c. All alkaline preparations must be prohibited.—Dr. Schott (Nauheim) said that every case must be provided for according to its own individual peculiarity. He advocated a mixed diet in heart cases, and small and frequent meals, generally at intervals of three hours, and of high nutritive value. Alcohol should be taken in a state of high dilution. It was unquestionably the case that certain wines well borne by continental patients produced acidity in some of the English, and in such cases it was better to fall back on small and regulated quantities of whisky or brandy in a state of free dilution.—Mr. A. G. S. Mahomed (Bournemouth) and Dr. George Lorimer (Buxton) also made some remarks, after which the discussion was adjourned.

Harveian Society of London.—A meeting of this society was held on March 19th, Dr. W. Winslow Hall, the President, being in the chair.—Mr. F. Jaffrey showed (for Mr. Crisp English) a girl, aged four years, whose gait had become waddling when she was two years of age and had remained so, but without giving any pain. There were some atrophy of the muscles about the hip and an inch shortening of the limb. The case was thought at first to be one of coxa vara, but a skiagram showed it to be a well-marked instance of congenital dislocation of the hip. Mr. Jaffrey asked for suggestions as to treatment.—Mr. Noble Smith considered the case a very favourable one for treatment by Lorenz's method.—Dr. Sidney P. Phillips showed an extreme case of Osteo-arthritis of the left knee in a man, aged 48 years. The patient had rheumatic fever at the age of 15 years and at the age of 33 years he began to suffer from osteo-arthritis. Many joints were now affected, but the left knee was enormously enlarged and was tense and elastic. A small amount of fluid withdrawn by aspiration proved to be sterile.—Mr. Jaffrey thought the treatment by massage and hot-air baths daily should be followed. Probably at least two or three different complaints were included under osteo arthritis. Very likely some cases were of bacterial origin. He had found guaiacum and sulphur of use in many instances.—Mr. Noble Smith said that no doubt the pathology of the disease differed in different cases, but in all cases there was increased tension in the bone. In chronic bone inflammation, therefore, he was in the habit of adopting "bone drilling." In tuberculous disease drilling was remarkably effective. It also relieved pain in the early stages of rheumatoid arthritis. He showed the drill which he generally used.—Dr. G. A. Sutherland remarked on the failure of drugs either to relieve the symptoms or to cure the disease. Whatever the nature of the original poison he thought it acted ultimately on the central or peripheral nervous system, so that the pains and deformities of the later stages were really dependent on a nerve lesion.—Dr. E. Cautley said that one definite type of osteo-arthritis was symmetrical in form and often occurred in acute attacks, simulating subacute rheumatism, and usually it began in the metacarpo-phalangeal joints of the first and second fingers. This type was most common in young women between 15 and 25 years of age; sometimes it occurred in young children and was frequently seen in later life in a more chronic and less severe form. It was incurable. Another type of the disease [illegible] in origin. A third form affected the larg [illegible] followed an inju [illegible] of nerve origin, [illegible] to some toxin. Some cases were preceded by neuralgic pains for months before any joint lesion was noticed.—The President advocated the use of cod-liver oil—at all events, in certain [illegible] Dr. W. J. Harris showed a woman [illegible] —Mr. [illegible] ering [illegible] Daniel [illegible] with [illegible] t the [illegible] also showed two cases of Monarticular Osteo-arthritis of the Elbow-joint.

Manchester Medi [illegible] a recent meeting of this [illegible] being in the chair, a disc [illegible] tration of the Vaccination Act.—Mr. David Owen in opening the discussion contended that all vaccination performed by a registered medical practitioner should be paid for by the State at the same rate as public vaccination, provided that the standard of the Local Government Board was reached. In this way the quality of vaccination in the country would be greatly improved, especially if it were made subject to some form of inspection which as "surprise visits" might be carried out without any great additional expense, and in estimating this expense the enormous cost of small-pox to the community should not be forgotten. It was important to reconcile public opinion to compulsory vaccination and revaccination, and given a free choice of medical man much of the present opposition would be removed. From statistics which he had collected he had no doubt that in Manchester at least the greater number of vaccinations did not reach the standard laid down by the Local Government Board, which might be taken as the standard of efficiency. There was nothing in the nature of the present Act to reduce the divergence between the vaccination results of the public vaccinators and those of private practitioners. The unsatisfactory nature of the present Act had been the subject of comment by members of the profession in the columns of the medical journals for nearly two years.—Dr. John Scott argued that the one essential of improvement was the proposition advanced by Dr. F. T. Bond of Gloucester and others that vaccination should be made a department of public health and placed under the control of the sanitary authorities. It was to be hoped that in the next Bill revaccination at the age of 12 years, as recommended by Mr. Jonathan Hutchinson and Sir W. Guyer Hunter before the Royal Commission, would be made compulsory. Dr. Scott offered three suggestions: (1) that vaccination should be placed in the public health department of the county council authority; (2) that the public vaccinator should do nothing else but this work; and (3) that the coöperation of medical men in educating the public in the efficiency of vaccination should be enlisted.—Dr. E. Vipont Brown said that the reason why such an enormous proportion of children were not vaccinated efficiently was that it sometimes paid the general practitioner to vaccinate inefficiently. When parents took their children to a private practitioner in preference to the public vaccinator it was very often in the hope that the former would put on only one mark, or at most two marks. Indeed, that was what they were constantly asked to do. The remedy was obvious: to make all general practitioners public vaccinators and to let the State pay them for efficient vaccination—and for efficient vaccination only. Then self-interest would cause them to educate their patients to understand the advantage of efficient vaccination as defined by Government and they would persuade them to submit to it.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 18th, Mr. J. Mackie, the President, being in the chair.—Mr. A. R. Anderson read notes of Three Cases of Operation for Perforated Gastric Ulcers. Two of the patients were shown and the third was stated to be well. When the position of the ulcer was such that the proceeding was feasible Mr. Anderson recommended that the whole ulcer should be excised and that the stomach should be sewn up by a double continuous suture. This, in his opinion, gave better results in that on recovery from the operation all symptoms of indigestion entirely disappeared, whereas when the ulcer was simply turned into the stomach and the perforation thus closed symptoms of indigestion frequently persisted.—Mr. W. M. Willis said that his experience bore out this contention and that excision was preferable to merely turning in when possible.—Dr. W. B. Ransom delivered an address on Public Measures for the Prevention of Tuberculosis. The lines which the education of the public in the matter of hygiene as a means of prevention of tuberculosis should follow were indicated. The question of the housing of the poor in relation to tuberculosis was alluded to; and the advisability of certain measures being adopted by the municipality as a means of checking the spread of the disease was suggested. It was resolved, on the motion of Dr. P. Boobbyer (medical officer of health of Nottingham), seconded by Dr. C. H. Cattle, that the meeting should be adjourned in order that this important question might be adequately discussed.—Dr. Ransom then gave notice that at the adjourned meeting he would move—

> That in the opinion of this society voluntary notification of phthisis is desirable.

——The adjourned meeting was held on Feb. 25th, the President again being in the chair.—Dr. Ransom having briefly introduced the subject of his address it was discussed by Dr. Boobbyer, Dr. F. H. Jacob, Mr. Wood, Dr. Mackenzie, Dr. W. E. Tresidder, Dr. W. Hunter, Mr. J. J. Dabell, and Dr. J. F. Blurton.—Dr. Ransom replied and then brought forward his motion as given above. He defined "voluntary notification" as referring both to patient and medical man. The object of such notification was, he suggested, that steps might be taken by the municipality, either by means of lady sanitary inspectors or of assistant medical officers of health, to carry out certain hygienic measures advisable in this disease and for the purpose of educating the public in the means for the prevention of infection.—The motion was seconded by Dr. Boobbyer and a spirited discussion ensued in which Mr. Wood, Mr. Anderson, Dr. E. C. Kingdon, Dr. Blurton, Mr. T. Geraty, Mr. Dabell, Mr. J. Thompson, Dr. Mackenzie, Dr. Hunter, and Miss Sarah Gray, F.R.C.S. Irel., took part.—On the motion being put to the meeting 11 members voted in its favour and six against it, whilst seven members remained neutral.

MIDLAND MEDICAL SOCIETY.—The ninth ordinary meeting of this society was held on March 18th, Mr. H. Langley Browne, the President, being in the chair.—Mr. A. Lucas showed a girl, aged 16 years, in whom he had Excised the Superior Maxilla nine months previously. The cavity had closed with the exception of a small aperture a quarter of an inch in diameter. With the aid of an obturator kept in place by a spring from the lower jaw practically the whole of the resulting deformity was obliterated and the patient was able to speak and to masticate normally. The growth for which the operation was performed was an osteoma arising in the antrum of Highmore. It had been present for many years and lately had increased rapidly. It was causing much disfigurement of the face and was encroaching on the orbital and nasal fossæ.—Mr. C. A. Leedham-Green showed a case of Xeroderma Pigmentosum in a child, aged seven years.—Dr. O. J. Kauffmann showed a case of Sarcoma, primary in the arches or spinous processes of the lumbar vertebræ. There were deposits in the spinal dura mater beneath the primary growth, but to the naked eye the cord itself appeared to be free from damage of any sort. There were secondary deposits in the retro-peritoneal lumbar glands and many in the liver. The patient was admitted to hospital with pronounced spastic paraplegia and symptoms locating the lesion in the upper lumbar segment. The history was that he had gone to work in perfect health one day in July, 1902, and that while working he had the sensation of having caught cold in his back. He walked home with difficulty and went to bed, and next morning he was unable to rise. He never again put his foot to the ground. He was admitted to hospital in December, 1902, and was then entirely paralysed in the legs, and soon he developed overflow-dribbling from the bladder and cystitis. A month later, without any change of symptoms, excepting the development of a slight boss in the lumbar region, he died. It was thought that the rapid onset of paralytic symptoms had been due to thrombosis of a nutrient artery produced by the presence of the tumour.—Dr. J. Douglas Stanley showed a specimen of Dilated Heart from a patient who also suffered from Pyloric Stenosis. The patient, a male, aged 38 years, had suffered from pain in the epigastrium after food for a year. There was occasional vomiting. The appetite was voracious. Death was due to collapse. On post-mortem examination the pyloric stenosis appeared to be caused by fibrosis round a simple ulcer situated in the pylorus.—Mr. A. W. Nuthall showed a specimen of Diffuse Carcinomatosis of the Intestine.—Mr. Christopher Martin read (for Mr. Edge) a note on the After-progress of a Case of Oöphorectomy for Recurrent Cancer of the Breast.—Dr. A. D. Heath read a paper on Scarlatiniform and Erythematous Eruptions.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—A meeting of this society was held on March 13th, Dr. V. H. Wyatt Wingrave, the President, being in the chair.—Dr. J. Dundas Grant showed a case of Deafness due to Myxœdema in a female, aged 59 years. The deafness in this case was a combination of nerve deafness and obstructive deafness and while the general symptoms had improved under thyroid treatment the deafness had remained much the same.—Dr. Atwood Thorne inquired what evidence there was to the effect that the deafness in this patient was due to myxœdema.—Dr. Dundas Grant, in reply, said that myxœdema was admitted to be a cause of deafness and that he had seen such cases enormously improved as regards their hearing when thyroid treatment was used.—The President also said that he considered myxœdema to be a cause of deafness.—Dr. W. Jobson Horne said that he had seen a small series of cases of myxœdema complicated with deafness and his experience was that the deafness did not improve with thyroid treatment.—The President read, on behalf of Mr. Mayo Collier, who was unable to be present, the notes of a case of Suppuration of the Frontal Sinus.—Mr. J. E. McDougall read a short paper on a New Method of dealing with Adherent Soft Palate.—Dr. L. H. Pegler read a short paper on an Unusual Experience after Partial Turbinotomy. The essential feature of the case was that there was a delay in healing but a successful result was at last brought about by the accidental application of a solution of iodine ("Mandl's pigment") stronger than was intended.—The President showed (1) a case of Tuberculous Granuloma of the Larynx in a female, aged 26 years; (2) a case of Lupus of the Larynx occurring in a boy and almost entirely confined to the epiglottis; and (3) a case of Aphonia due to disease of the larynx the nature of which was uncertain.—The President also showed a case of Bilateral Adductor Paralysis following tonsillotomy in a girl, aged 14 years. She remained aphonic for 14 days after the operation, and at once regained her voice after a single application of the interrupted current. He felt inclined to regard the nitrous oxide gas, which was the anæsthetic used, as the cause of the paralysis.

CLINICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on March 17th, Dr. T. Arthur Helme being in the chair.—Mr. F. H. Westmacott made a communication on Nasal Obstruction and its Causes. He indicated the leading symptoms of this condition—namely, inability to breathe freely through the nose, a certain facial expression, "adenoid facies," present in nearly all cases, discharge from one or both nostrils forward or into the nasopharynx, thickness of speech or voice, the so-called nasal voice, broadening of the bridge of the nose, a short upper lip, and open mouth. Of the various nervous or reflex symptoms he mentioned headache, cough, asthma, deafness, convulsions (epileptiform in character), as well as a dull mental condition and inability to concentrate the mind and attention on any subject (sometimes called aprosexia). Loss [illegible] be present in some cases. [illegible] e "pigeon-breasted," the [illegible] negative pressure in the [illegible] r cartilages. In a child the occurrence of a unilateral obstruction with a discharge more or less offensive and blood-stained pointed strongly to the presence of a foreign body, whilst in an adult a similar condition might indicate an empyema of the accessory cavities. Should the patient be able to detect an offensive odour in the discharge, then in all probability the antrum of Highmore was affected, but if no odour was detected by the patient, or if there was loss of smell on that side, suppuration in one or more of the upper accessory cavities was indicated.—Dr. W. E. Fothergill read a paper entitled "Some Personal Impressions on Puerperal Eclampsia." He condemned the induction of labour as a routine practice in such cases and stated that in many cases it probably produced a fatal issue.

IPSWICH CLINICAL SOCIETY.—A meeting of this society was held at the East Suffolk Hospital on March 12th, Dr. W. W. Sinclair, the President, being in the chair.—The President showed two eye cases: (1) a case of Cataract complicated with extensive iritic adhesions operated on successfully; and (2) a case of Congenital Ptosis with associated movements of the affected eyelid.—Dr. H. H. Brown showed a case of Locomotor Ataxy with a Charcot's Knee. He then read notes on a case of Intestinal Obstruction in a child where a preliminary colotomy was performed and subsequently a large portion of gut was successfully resected. He also read notes on a case of Stricture of the Œsophagus due to the patient swallowing a mineral acid; gastrostomy was performed and the patient was now well.—Mr. J. F. C. Hossack read notes on some cases of Influenza complicated with Jaundice.—Mr. A. T. Pringle read notes on a case of removal of the Sigmoid Flexure for Carcinoma; the patient was doing well.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—At a meeting of this society on March 25th Dr. J. Nigel Stark, who was in the chair, read a paper on Ovariotomy in a patient suffering from Exophthalmic Goitre. In the case reported the symptoms of Graves's disease were very well marked and the tachycardia was excessive. Operation had to be resorted to. The therapeutic exhibition of thyroid had been detrimental. At the operation the tumour, which extended to the stomach, was partly gangrenous from twisting of its pedicle. The acute onset of the

was much relieved by the operation but succumbed on the second day. The heart-rate was then varying between 160 and 200 per minute. Dr. Stark thought that the condition had really been aggravated by the administration of the thyroid and he strongly advised that before operation on such cases the general condition should be improved. He recommended the administration of strychnia and perhaps digitalis some time before operation.—Dr. Edgar then reported four cases where Labour had been obstructed by Tumours in the Pelvis.—In the absence of Dr. Munro Kerr Dr. Russell gave a short outline of a case where Labour had been obstructed by a Myoma. Vaginal cœliotomy had been successfully performed.

Reviews and Notices of Books.

A Manual of Family Medicine and Hygiene for India. By SIR WILLIAM MOORE, K.C.I.E. Seventh edition. Revised by Major J. H. TULL WALSH, I.M.S. London: J. and A. Churchill. 1903. Pp. 680. Price 12s.

THIS book is intended neither for educational nor for technical purposes and is not meant to take the place of medical assistance and advice, but is offered as a substitute where such aid is not obtainable and as a means by which improper treatment may be avoided. It will be remembered that the origin of this work was the offer of a prize by the Government of India for a manual suitable for the numerous individuals necessarily scattered over India in positions more or less remote from medical and surgical aid.

Much care and attention have evidently been bestowed by the reviser on the present edition; he has endeavoured to bring each section up to date as regards the causation, symptoms, and treatment of the diseases dealt with and yet we doubt if the utility of this issue will be as great as that of its predecessors. Major Walsh has introduced scientific terms into the book instead of describing medical matters in "popular language" as had been done in the previous editions, and here we venture to think that he has made a very serious mistake. In our experience this work has been hitherto chiefly used by the less well-to-do class of Europeans and by the Eurasian population in India and especially by the female and less well-educated portion of this population, and we think that the introduction of scientific terms and of the skilled treatment often advised distinctly detracts from its usefulness. Many of the suggestions made require medical education for their comprehension and much of the treatment we can only call dangerous when removed from the hands of a properly qualified medical man.

In our opinion a book has passed beyond the side of safety and beyond the requirements of the non-medical public which recommends the testings of his secretions by a sufferer, the passing of catheters in retention, and the injection of diphtheria antitoxin with sterilised hypodermic syringes; which advises the puncture of the drum in inflammation of the middle ear; which prescribes large doses of opium, strychnine, nitrite of amyl, and other poisons; which expects a layman to detect the increase of resonance and the alteration in the breath sounds in emphysema; and which mentions that no attempt should be made by amateurs to syringe out the womb (p. 553). Nor do we think that writing of butyric and lactic acid dyspepsia and of the bacilli which cause the fermentations can serve any useful purpose.

429 pages of the volume are devoted to the description and treatment of various diseases and 130 pages to accidents, injuries, pregnancy, and labour. In the paragraphs on inflammation and abscess of the breast we miss the prophylactic treatment which might so usefully be dwelt on in a

book such as this; more also might be said of the open-air treatment of pulmonary tuberculosis and less of the medicinal; and under diseases of the lung we look in vain for a description or recommendation of the useful pneumonia-jacket. We do not think that the editor has noticed the most recent evidence as to the maximum incubation period in measles and we doubt if the recommendation to use the sulphates in inflamed piles will meet with much approval.

The description of the contents of the Indian medicine chest is excellent and very useful. We wish also to draw attention to the section on the Management and Feeding of the Infant and to Chapter VI. which treats of the Preservation of Health in India, a chapter which may be read with real advantage by all those going to India and in which young medical men embarking on an Indian career will find hints and information not to be found so readily elsewhere. Would that the directors of our great steamship companies could be so impressed with Major Walsh's remarks (p. 593) on the subject of the accommodation for sick passengers as to make improvements. What can be more painful than to see the sufferings of debilitated patients on board ship? Hospital cabins with extra attendance and a good and suitable cookery would be the greatest boon to helpless invalids, especially when suffering from diseases of the bowel and lung. As Major Walsh writes, "Such invalids ought to be in a cabin alone, not only for their own sake, but for that of others."

Chapter VII.—the Management of the Sick-room—in which its appearance, aspect, cleanliness, conservancy, deodorisation and disinfection, and many other points are discussed—is a very useful one, and the suggestions for "dietetic preparations" for invalids are clear and simple.

The book is printed in clear type, is well bound, and is a [illegible]fortable one to hold. More care might have been taken [illegible]oof correction—even on the first page there is a printer's [illegible] in the heading of the chapter, and "he skin" at 183 reads curiously.

The [illegible] Medical Treatment of Children in I[illegible] [illegible] A. BIRCH, M.D. Brux. Fourth edition, revised and enlarged. Calcutta: Thacker, Spink, and Co. London: W. Thacker and Co. 1902. Pp. 498, crown 8vo. Price 10*s.* 6*d.*

IN this new edition the high character and usefulness of this work are both well maintained. The author states that circumstances would have prevented him from preparing this new edition but for the assistance he has received from his friend, Dr. E. H. Young of Okehampton, who placed his large experience and such spare time as a busy practice permitted ungrudgingly at his disposal. With Dr. Young's assistance and the free access to his extensive library every page of the work has been carefully considered. The first edition of the book appeared in 1879 when Dr. Birch was asked by the publishers to re-write "Goodeve's Hints for the Management of Children in India," and its object was to instruct as to the rearing of children in India and to enable the parents to meet the emergencies incidental to child-life in that country without supplanting professional advice. When, seven years later, a second edition was called for, Professor D. B. Smith and Professor de Chaumont of the Army Medical School, Netley, went through the whole of the text and made various suggestions which were acted on. The third edition (1894) brought forth many important alterations and some additions and Dr. Birch more than ever tried to convey "a simple idea of the principles which should guide the rearing of children in India and the management of their maladies in that country, feeling convinced that the mere enumeration of sets of symptoms and treatments is unsatisfactory, puzzling, and unpractical." The present issue is divided into four parts which deal successively with the Management of the European Child in Health in India, the Nature, Mode of Spreading, Prevention and Detection of the Illnesses of European Children in India, the Management of the European Child in Sickness in India, and the Administration and Application of Remedies to Children.

Each of the 59 chapters may be studied with benefit. But may we suggest that in a future edition those on fractures and accidents may well be extended so as to embrace all the points which are brought out in the useful "First Aid" manual published and used by the St. John Ambulance Association? The chapter on the examination of sick children is a valuable one and is full of hints enabling parents to study and to understand their children's varying conditions; that on convulsions is also much to be commended. Chapter XVI. deals largely with the reduction of the excessive heat of the body in fevers and we are glad to note the stress which is laid on the worth of the cold bath and the use of the wet pack and of oil friction, the latter being a proceeding the value of which is well known to the natives. The hints on the administration of remedies are very practical and the medicines recommended are such as can be easily prepared.

After very carefully perusing the book we feel that we can unhesitatingly recommend it. It is most clearly written; the advice is not only sound and such as is capable of being carried out by any mother of average intelligence, but the volume is also replete with useful information from cover to cover, and due caution is always observed when drugs which might possibly have untoward effects are recommended. The edition is not only a distinct advance on the last issue, but it is brought thoroughly up to date, and we hope that it may find its place in many homesteads which children make glad in India and the far East.

The Treatment of Tabetic Ataxia by Means of Systematic Exercise. By Dr. H. S. FRENKEL, Medical Superintendent of the Sanatorium "Freihof" in Heiden (Switzerland). Translated and edited by Dr. L. FREYBERGER, M.R.C.P. Lond., Honorary Physician to the St. Pancras and Northern Dispensary; the Pathologist to the Great Northern Central Hospital. With 132 Illustrations. London: Rebman, Limited. 1902. Pp. 185. Price 12*s.* 6*d.* net.

THIS volume is intended to be an exposition of the principles and practice of the "compensatory movement treatment" of tabetic ataxia. Dr. Frenkel's method of treating this disease by systematic and graduated exercise does not claim to influence the tabetic process itself, but to exert a beneficial effect on the most prominent symptom—the ataxia. Since this method of treatment was first introduced it has been improved and simplified. Dr. Frenkel's method of treating tabetic ataxia differs from that associated with the names of Professor von Leyden and Professor Goldscheider in two important points: it lays the greatest stress on the careful repetition of movements and not on athletic strengthening of muscles and, secondly, it requires very little apparatus.

The first part of the work gives an account of the symptoms and various types of tabetic ataxia, but the main part of the volume is occupied with a minute description of the movements and exercises employed by Dr. Frenkel in his particular method of treatment. This description is somewhat difficult to follow, as must necessarily be the case when expressing certain movements in words, more particularly as the exercises are very numerous. This difficulty is, to some extent, overcome by an excellent series of reproductions of photographs and diagrams. Doubtless the exercises could be learned by practical demonstration in a fraction of the time which would be occupied by attempting to follow them from a written description, and we can only express our opinion that Dr. Frenkel has been but partially successful in explaining his methods by the publication of this work.

LIBRARY TABLE.

Artificial Infiltration Basins for Potable Water. By J. GUST RICHERT. London: Hodgetts, Limited.—Mr. J. Gust Richert of Stockholm has republished in pamphlet form a paper recommending the more general use of artificial infiltration basins for the preparation of water for domestic supplies. The essence of the system is to make use of the soil for the purification of the water and three ways are mentioned in which this method is now practically used: (1) filtration through a porous river bed; (2) irrigation, similar to that used for the purification of sewage; and (3) irrigation basins possessing surfaces which can be cleansed. The use of the first of these methods is open to more than one objection and it is not likely that its use will be generally adopted in this country. The results obtained in France are deterrent. Nor does the second method possess any advantages over the system of purification by sedimentation and filtration which usually can be easily applied to upland waters. The use of cleansible infiltration basins, which is the plan adopted at the Gothenburg waterworks, might probably be utilised with advantage in some rural districts in this country. The system is really one of great simplicity. The reservoir, a basin, is lined with sand through which the water penetrates and then passes for some considerable distance through the ground. The surface of the sand requires cleaning at intervals in the usual manner and it is therefore necessary that at least two infiltration reservoirs should be provided. The water is purified by its passage through the sand and the soil and its temperature is lowered in summer and raised in winter in the course of its transit, so that by this means the water obtained in the collecting pipe is pretty constant in temperature. It is evident that only certain localities are suitable for such a system as that which has been briefly described. The ground itself must be free from poisonous matter and from animal pollution and a considerable area is required. When all these conditions are present the system is not without its advantages, the chief of which perhaps is the uniformity of the temperature of the water. For these reasons we have thought it worth while to call the attention of those interested in rural water-supplies to the question. The chief object of Mr. Richert's paper apparently is to advocate this system for the water-supply of London—a purpose for which it would be unsuitable for many reasons which it is not necessary to mention.

Massage and the Swedish Movements. By KURRE W. OSTROM. Fifth edition. London: H. K. Lewis. 1902. Pp. viii.-181. Price 3*s.* 6*d.* net.—This is a useful little book upon massage and Swedish movements which when employed in the right way are admirable adjuncts to ordinary medical treatment. Mr. Ostrom, we are glad to see, is very strong upon the point that massage ought to be fully controlled by the medical profession as it is in Europe. He is writing of massage as he found it in the United States of America where quacks of all kinds flourish in an even more brazen-faced manner than they do in England, but whatever may be the case in other European countries we are sorry to say that massage in this country is not fully controlled by the medical profession. Mr. Ostrom considers that massage and movement treatments should only be applied by educated and properly trained persons, with due regard to the physician's directions—an opinion with which we quite agree.

Burdett's Official Nursing Directory. Fifth year. London: The Scientific Press, Limited. 1903. Pp. 439. Price 3*s.* net.—This the fifth annual edition of Sir Henry Burdett's useful Directory differs from that of last year in that a list of institutions supplying trained nurses for private cases has been added. This list, which will be found of value to practitioners, gives particulars of the number of nurses employed, the charges made for their services, and, in some cases, of the length of training required by the institution in question. The other features of the work remain the same as in last year's issue.

A Historical Companion to Hymns Ancient and Modern. Edited by the Rev. ROBERT MAUDE MOORSOM. Second edition. London: C. J. Clay. 1903. Pp. xxvii.-380. Price 5*s.* net.—We feel some diffidence in reviewing this work, for hymnology and medical science are at more or less opposite poles. But still Sir Thomas Browne wrote a real hymn, we mean his "dormitive" which was closely modelled on two hymns from the Sarum Breviary, while Henry Vaughan, also a medical man, has given us a number of devotional poems some of which are extremely beautiful, although they are perhaps not hymns in the sense of being rhythmical compositions fit for use in public worship. Mr. Moorsom's little book will bring home to those who read it how much the English Church owes to the compilers of "Hymns Ancient and Modern." It will also show how inferior are most modern hymns to ancient ones. We mean as regards their use in the public worship of the church, for as a rule they are all subjective. Of course, there are some fine modern hymns, notably Newman's "Praise to the Holiest in the Height" and Watts's "Jesus shall reign where'er the sun," and this last is mainly a paraphrase of Psalm lxxii. Mr. Moorsom's book is very interesting, and we only hope that the forthcoming edition of "Hymns Ancient and Modern" will be found to have taken note of some of his suggestions for a "Book of Common Praise."

Disinfectants and Antiseptics: How to Use Them. By EDWARD T. WILSON, M.B. Oxon., F.R.C.P. Lond. Fortieth thousand. London: H. K. Lewis. A folding card. Price 1*s.* per dozen.—This card of directions for the domestic use of disinfectants and antiseptics contains much that ought to be kept in mind by heads of families and the public in general and the essentials of the subject are explained in a plain and easy style. Hot air, hot water, and steam naturally hold the first place in the treatment of infected clothing or other articles of personal use. A variety of chemical disinfectants are also enumerated, including carbolic acid, chloride of lime, formic aldehyde, corrosive sublimate, Condy's fluid, and sulphurous acid. With regard to this last-named substance it is almost a pity that Dr. Wilson after recommending the burning of brimstone or sulphur candles, should go on to speak of cylinders containing the compressed gas, for these require more careful management than is to be expected from an ordinary householder. Condy's fluid is essentially a permanganate of sodium and not of potassium, a point to which we have already referred in THE LANCET of Dec. 1st, 1900, p. 1587.

Applied Religion. By W. WINSLOW HALL. London: R. Brimley Johnson. 1902. Pp. 143. Price 3*s.* 6*d.*—This book is divided into four sections which deal respectively with (1) Personal Applied Religion; (2) Social Applied Religion; (3) National Applied Religion; and (4) International Applied Religion. It contains also a proem and epilogue in verse and four hymns and four sonnets, one of each of which is devoted to each of the divisions of the book. The title "Applied" Religion is reminiscent of the same word used in connexion with mathematics or to one of the other exact sciences and its occurrence in the present connexion seems rather to imply that religion itself is not in its nature practical. The author of the book appears to be an original thinker and incidentally gives a form of prayer which may "suit some" as an alternative for the Lord's Prayer, while he explains with great clearness texts of scripture which have given rise to much difference of opinion amongst theologians. The book has presumably been sent for our criticism because the author has a special message for members of the medical profession. He criticises the dress normally worn by them in his article on Applied Religion in regard to Clothing, and in his practical notes he gives an example of what dress should be worn by practitioners who possess the true faith. The strictly proper "medic," while he is working for his bread and grappling with disease and death, usually handicaps himself with a load of dingy, hampering, and complex "casements." Let these be contrasted with the dress of the middle-aged London "medic" who, we are pleased to learn, finds it easy to earn his living. This gentleman wears next the skin a single layer of cellular cotton with collar and cuffs of the same material, a loose jacket, vest, and trousers of serge, thin socks, "tan shoes," and a soft, well-perforated, felt hat. The diet of the same observer is also apparently given as an example of applied religious life. He breakfasts at 8 o'clock on oatmeal porridge and milk, one biscuit of pure protene, one and a half slices of bread with butter or jam, and two cups of "swiltzer" as adjuncts. His lunch consists of bread and cheese, with butter, jam, or fruit "as adjuncts." In the afternoon he has two cups of weak tea and he dines at 7 o'clock "off" cheese, protene biscuits, with potato or other vegetables and olive oil, some milk or suet pudding, and occasionally some fruit. One of the sonnets in the book is devoted to the censure of excessive eating and opens with the lines:—

> "Weird oneness! not a mouthful in excess
> But venoms me and hungers haggard poor."

The keynote to the epilogue is given by the first line, "Gabgabble not! do it!" This mysterious command, if we read it aright, is one that can be very well laid upon most persons who possess elaborate rules of living. By all means let the man with views about his clothing, his diet, and his creed put on what he likes, eat what he likes, and believe what he likes. But when he starts out as proselytiser let him be very certain that what he has to say is for the genuine good of his generation lest that generation turn round on him and forbid him to "gabgabble."

JOURNALS AND MAGAZINES.

The Practitioner.—Mr. W. Arbuthnot Lane is always interesting in his writings upon fracture—and generally iconoclastic. His contribution on the Mode of Production of Fractures of the Lower Extremity by Indirect Violence in the March number of the *Practitioner* forms no exception to the rule. Commonly accepted theories repeated from text-book to text-book and from generation to generation, the idols of succeeding series of examinees, are subjected to the searching investigation of Mr. Lane's science and are hurled to the ground. His article is accompanied by some excellent reproductions of skiagrams. Dr. Herbert S. French provides an instructive article upon Examination of the Blood, with some striking examples showing its wide range of value in settling diagnostic difficulties in certain cases. A case of double pyosalpinx, at first regarded as typhoid fever and recognised with certainty as deep-seated suppuration mainly by a blood count, is particularly valuable. Similarly the value of unusual prevalence of coarsely granular eosinophile cells comes out strongly in a case where the diagnosis hesitated between asthma and intra-thoracic tumour Other shorter original articles and a careful review of recent work on disease of the liver, by Dr. Rolleston, combine with the editorial notes to make a capital number of the journal.

The Journal of Physiology. Edited by Sir MICHAEL FOSTER, K.C.B., F.R.S., and J. N. LANGLEY, Sc.D., F.R.S. Vol. XXIX., No. 2. March 16th, 1903. London: C. J. Clay and Sons. *Price 7s.*—*The articles contained in this number of the Journal of Physiology are the following*:—1. Contributions to the Physiology of the Lungs, Part I., The Bronchial Muscles, their Innervation and the Action of Drugs upon them. The authors of this article have been able to construct and to apply an oncometer to a lobe of the lung and to determine the changes in its volume during its movements in normal and artificial respiration. The text is illustrated by many tracings. It is shown amongst other points that the broncho-constrictor fibres run in the vagus, as do also the broncho-dilator fibres, and that the latter are particularly well developed in the cat. The sympathetic contains no broncho-dilator fibres. The action of many drugs is described. The article is a long and valuable one. 2. On the Uniformity of the Pancreatic Mechanism in Vertebrata, by W. M. Baylis and E. H. Starling. The authors of this article maintain that the secretion of pancreatic juice is excited in all the vertebrata by the action of an acid leading to the production of a substance named secretin in the epithelial cells of the intestinal mucous membrane. This substance is at once absorbed into the blood-vessels and is carried by the blood to the pancreas, on the cells of which gland it acts as a specific stimulus. 3. The Estimation of Urea in Blood, by Joseph Barcroft. The essential point of this article is that the globulins and other proteids are removed by precipitation with alcohol and subsequently by the employment of sodium hypobromite. 4. Remarks on the Dorsal Spino-cerebellar Tract, by C. S. Sherrington and E. E. Laslett. 5. Further Observations upon the Respiratory Exchange and Temperature of Hibernating Animals, by M. S. Pembrey. These observations have been made upon dormice and hedgehogs. The temperature of a dormouse awaking from torpidity may rise as rapidly as 19° in 42 minutes, the respiratory exchange is greatly increased, and the respiratory quotient rises to 0·75. The temperature of a hedgehog waking from its winter sleep may rise 20° in 120 minutes. The respiratory exchange is greatly increased; it may be 30 or 40 times as great as that of the torpid animal. The respiratory quotient rises to 0·78.

New Inventions.

APPARATUS FOR THE OPEN ADMINISTRATION OF NITROUS OXIDE GAS.

SINCE I first drew attention to the practicability of administering nitrous oxide *openly*[1] I have been endeavouring to make the process more simple and to devise more suitable apparatus. My aim has been to enable this system of administration to be carried out in positions of the patient's face other than those permitted by the face-pieces shown in THE LANCET of Feb. 4th, 1899, and at the same time to facilitate the suitable delivery of the gas.

For convenience of description the apparatus requisite for open administration may be regarded as consisting of two entirely distinct portions, each with its own definite function —viz., (1) the appliances by which the discharge of the nitrous oxide gas can be at will controlled; and (2) a special facepiece or inhaler for receiving and guiding the gas and air to the patient; in short, a delivery apparatus and an *open* inhaler. In the same manner the duties of the administrator are twofold; on the one hand he must regulate and control the supply of the gas by means of the delivery apparatus, and on the other he must see that the gas is safely conducted to the patient by means of the inhaler. The delivery apparatus may be a mere tube leading from a gasometer or an elaborate arrangement of cylinders and brasswork; whatever type one proposes to work with should be capable of very rapid and smooth control and should be silent in its action. The employment of a bag is a convenience rather than a necessity; it assists in breaking the force of any unduly violent escape of gas; it also serves as a guide to the administrator, for by observing the degree of expansion caused by each fresh discharge *from the cylinders it is easy to estimate the* amount of overflow taking place into the inhaler. With a *reliable* delivery apparatus the discharge of gas can be regulated very accurately and the expenditure kept within very small limits. The employment of large gas-bags tends both to waste and to irregularity of delivery, for it is not so easy to increase rapidly, or to check suddenly, the flow of gas from the mouth of a large bag into the inhaler as it is from a small one. A bag of about one gallon capacity is in my [illegible] The tube leading from the [illegible] not be attached to the dist[illegible] bag but be led into its proximal end or mouth (i e., close to the inhaler), the bag hanging free (see illustration, B, D), so that the drag of the heavy indiarubber tube upon it may be avoided; in open administration the weight of the tube when attached to the fundus of the bag is very liable to hamper materially the smooth delivery, particularly when the head of the patient is in an awkward position or at the extreme stretch of the apparatus.

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[1] THE LANCET, Oct. 8th, 1898, p. 933, and Feb. 4th, 1899, p. 295.

FIG. 1. FIG. 2.

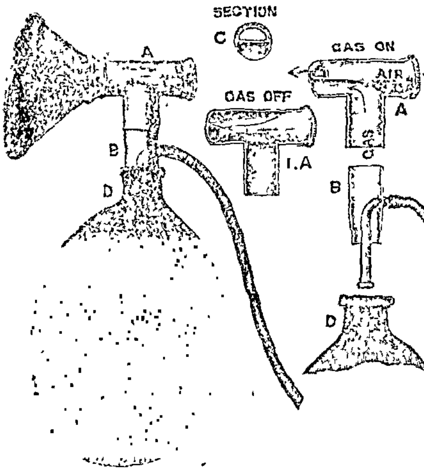


Fig. 1 shows a simple arrangement for filling an open cup-shaped inhaler. Fig. 2 shows an open stop-cock and attachments, in section.

The mouth of the gas-bag can be most conveniently opened or shut by means of the open stopcock (A), devised by myself. It is formed of a T-shaped tube, the upright portion of which is connected with the bag, and one end of the crosspiece with the inhaler Into the crosspiece is telescoped a specially shaped inner tube, which fits the *outer* closely at *one* end, but is flattened obliquely at the other towards the facepiece (as indicated in the diagram) so that there it merely occupies half the lumen of the outer (C). The effect of this is that in one position ("Gas on" in diagram) a double tube is produced for the admission simultaneously of gas and air; but by turning the inner tube round ("Gas off" in diagram) connexion with the bag is shut off so that the further admission of gas is prevented. This stopcock can be inserted into the top of an ordinary facepiece, and as it is open at both ends this will constitute a form of open inhaler. It is made entirely of metal, and as it contains no valves or other mechanisms, cannot get out of order without great violence, and may be cleaned and boiled as frequently as desired. Whatever form of inhaler be employed it must be made of gas-tight material and of such a shape that it can be accurately adapted to the patient's face and thus prevent leakage from below, whilst its sides should be sufficiently high to prevent loss from overflow. It will be observed from the foregoing that the administrator merely controls the supply of gas and insures its delivery to the patient, the air does not need management. Should the effects produced upon the patient not be commensurate with the quantity of gas employed it will almost invariably be found that the patient is not actually receiving the gas in consequence of the faulty application of the inhaler to the patient's face. At the commencement of an administration the delivery of the gas should be moderately free, but always gentle, the volume provided for each breath being gradually increased until the patient appears to be passing under its influence, when the supply should be reduced.

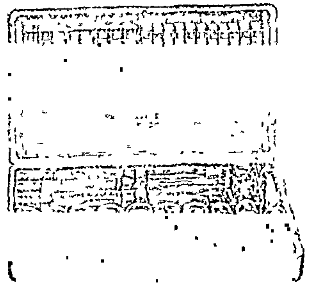
The open system of administration can be applied *viâ* the nose, the mouth, or through a tracheotomy tube with equal facility. Through the nose it is most conveniently carried out by means of an open stopcock fitted to a specially shaped nasal inhaler which accurately fits the patient's face, so that the nares remain in direct communication with the surrounding air through the permanently open central tube of the stopcock. *During the inhalation of the nitrous oxide it is not necessary to cover the mouth.* Although I have frequently demonstrated the feasibility of administering gas openly through the nose, it is only recently that I have made any serious attempt to apply the system in this manner. The effects appear to be identical with those produced when the gas is inhaled through any other channel, with one exception—viz., that the resulting anæsthesia appears to be produced with greater rapidity, frequently within 15 seconds, and that it can be maintained with a very small additional *expenditure of gas and independently of any intercurrent* mouth-breathing. The patients recover as rapidly after a ten minutes' administration as after an administration lasting only a single minute. They are never cyanosed and do not experience any unpleasant after-effects. I have employed the open method of administration on considerably over 5000 individu[illegible] that it is sound, useful, [illegible] of cases. The various forms of apparatus have been made for me by Mr. J. H. Montague, 101, New Bond-street, London

GEORGE B. FLUX, M.D. Brux., M.R.C.S. Eng.,
L.R.C.P. Lond., L S.A.

Old Burlington street, W.

A POCKET EMERGENCY CASE.

THE pocket case shown in the illustration enables the practitioner to carry in a convenient form the drugs that are most likely to be required in an ordinary emergency and in country places will often save him the necessity of returning home during the visiting round for the purpose of making up some particular draught. The selection of drugs for filling the case may, of course, be varied according to individual taste. The stock that I carry consists of 12 varieties of hypodermics (morphia, cocaine, atropine, pilocarpine, ergotinine, &c), seven varieties of tablet triturates, three varieties of compressed tablets, and six varieties of chocolate-coated tablets named respectively "active cathartic," "migraine," "creasote compound," "opium," "rheumatic," and "cascara" I also take a hypodermic syringe, two needles, one exploring needle, a tube of Schimmel's needles, drachm bottles of ether and of distilled water, and a pipette for eye



not to waste time as the arm must go. They hesitated to amputate, however, in view of the comminuted fracture till Professor Bassini should arrive from Padua; and so they watched all night by his bedside, relieving each other by twos. On the next morning, the 26th, Professor Bassini joined them and after a long examination of the wound, conducted by the patient's desire without anæsthesia, he coincided with his Florentine brethren that amputation should not be performed as, among other reasons, the warmth of the right hand proved that the circulation was being restored. Professor Bassini thereafter returned to Padua, leaving his intrepid patient in the hands of his colleagues who are now beginning to hope that the arm may be saved, though, it is feared, never likely to be available for the splendid work associated with the name of Colzi. The scene at the hospital all this time has been inexpressibly touching, patient after patient in all stages of cure or convalescence importuning the official staff for news of their beloved benefactor, while the King is kept informed by His Majesty's express desire of the professor's condition. As I write the latest bulletin has been handed in to me, dated 9 A.M.: 'Tranquil night. The general state is good. The conditions of the limb are unchanged.' Professor Colzi, I may add, is only in his fiftieth year, having being born at Monsummano barely half a century ago. His record in the radical cure of hernia is unequalled in Italy and scarcely surpassed in Europe, while in other departments of surgical intervention his reputation stands exceptionally high."

THE PATHOLOGICAL CHANGES ACCOMPANYING TRIGEMINAL NEURALGIA.

IN the *Journal of Nervous and Mental Disease* for February Dr. Sidney Schwab gives an account of the systematic study of six Gasserian ganglia which had at various times been excised in cases of severe and intractable facial neuralgia. In three of the cases the ganglia were removed before any peripheral operation, such as excision, had been performed on the branches of the trigeminal nerve. All these specimens were fixed and hardened while fresh and sections were prepared according to the latest methods, including Nissl's and Held's methods, which are in use for revealing changes in nerve cells and nerve tissues generally. Complete serial sections were made of every ganglion parallel to the largest diameter. The following were the typical changes found in these six cases. The nerve cells in the peripheral parts of the Gasserian ganglion showed changes varying from a slight degree of chromatolysis to profound changes of total cell disintegration and nuclear migration. In three of the six ganglia pigmentation was observed around the nuclei of the nerve cells. This pigmentation was so different in character and distribution from that present in normal conditions that it would be regarded, adds Dr. Schwab, as a deviation from the normal. In one of the ganglia a sclerosis of the tissue with excess of fibrous formation was found. In some of the ganglia neuritic changes were observed in the peripheral branches, but only in those cases in which a peripheral operation had previously been performed. Dr. Schwab points out that all of these ganglia "were cleanly removed" and given to him in a fresh state well adapted for histological study. They were all from cases of the most severe form of trigeminal neuralgia, and in three of them there had been no peripheral operation to complicate the microscopical findings. It therefore seemed a fair conclusion that, if trigeminal neuralgia depended upon disease of the Gasserian ganglion, these six ganglia would exhibit the pathological changes which were associated with the chief symptoms. The complete disappearance of the symptoms of neuralgia when the ganglion was removed or when the root which connected it with the brain was divided showed that the ganglion was the seat of the disease. Two explanations are offered as to the cause of the intense pain; first, that it was produced by an irritant or toxic agent circulating in the blood and having a selective action upon the nerve cells of the Gasserian ganglion; and, secondly, that local or mechanical causes, such as pressure on the ganglion and overgrowth of connective tissue within it, were the agencies. It was difficult to decide between these two sets of causes and it was probable, adds Dr. Schwab, that both played a part in causing trigeminal neuralgia, the toxic factor being the more important of the two. The nerve cells in the Gasserian ganglia exhibited in all cases signs and changes indicative of prolonged irritation and over-stimulation, in some respects closely resembling the appearances produced (artificially) by electric stimulation for several hours. As to the nature of the toxic or other agency which produces such pathological irritation of the cells, adds Dr. Schwab, we are still in ignorance, but the results of investigation have shown that the locus of the disease is in the Gasserian ganglion and that the agency is a toxic or irritant substance. The ground for future inquiry is thus narrowed and the tracing of the agency in question should therefore be practicable.

THE DISTRIBUTION OF PLAGUE.

AS regards the Cape Colony, the medical officer of health of the colony reports that for the week ending March 7th the state of plague at the various places in the colony was as follows: At Port of Table Bay 1 Indian male adult, a member of the crew of the s.s. *Nevasa* which arrived in Table Bay on March 3rd from Bombay and Eastern African ports, died suddenly from plague on board that vessel in Table Bay on March 6th. The rats on board this vessel have been found to be infected with plague. At Port Elizabeth 11 cases of plague were discovered during the week ended March 7th—namely, 1 European male, 6 coloured males (2 of whom were found dead), 3 coloured females, and 1 native male. The cases were discovered on the following dates—namely, 3 on March 1st, 2 on the 2nd, 2 on the 3rd, 1 on the 4th, 2 on the 5th, and 1 on the 6th. At the plague hospital, Port Elizabeth, 2 coloured male patients died during the week, leaving 23 cases still under treatment. Plague-infected rats continued to be found in different parts of the town. A mortality among rats is occurring at East London at the wharves on the east bank of the Buffalo river. Certain of the dead rats have been proved to have died from plague. During the week ended March 7th 4 cases of plague were reported at King William's Town, 2 being adult male Europeans and 2 being adult male natives. Of the latter, 1 died on March 6th; the remaining 3 cases were isolated in the plague hospital. Plague-infected rats continued to be found at Graaf-Reinet during the week and a death suspicious of plague occurred in the person of a European adult female.

THE SUBJECTIVE SYMPTOMS OF TABES DORSALIS.

Professor Joseph Collins of the New York Post-Graduate Medical School has published in the *Medical News* of March 7th a paper dealing with the subjective symptoms of tabes dorsalis, based upon a study of 140 cases of the disease. An account of Professor Collins's observations on the objective symptoms of tabes, based on a study of the same number of cases, appeared earlier in the year and was then referred to in THE LANCET.[1] The subjective symptoms of tabes, says Professor Collins, are variable, the objective symptoms are constant. The former, however, comprised a number of important conditions as ascertained by the study of the above 140 cases. Pain in the lower extremities was one of the most constant symptoms. The pain was usually "shooting" or "lightning-like" in character, and less frequently it was described as "tearing" or "burning." Intensely painful spots were also found on the limbs. All these pains of tabes may be accompanied, adds Professor Collins, by violent contraction of the painful part. Next in importance were crises or attacks of suffering and distress felt in the stomach, the bladder, the rectum, and the larynx. Paræsthesiæ of the extremities, such as numbness, tingling, formication, "pins and needles," and a feeling as of the skin being "tightened," were also common. Vertiginous sensations were frequent, especially when the patient was in an unaccustomed place. The remaining subjective symptoms of tabes comprised lessened sexual desire and a feeling of inability to expel urine freely from the bladder. Professor Collins concludes by giving a classification of tabes into "types" for clinical and prognostic purposes. These comprise a neuralgic type with pains of great severity as the main symptom, a visceral and trophic type with visceral "crises" and joint disease, a markedly ataxic type in which the patient becomes rapidly helpless and bedridden, a cerebral type in which optic atrophy appears early, a cervical type in which the upper limbs are chiefly involved, a benign type in which the progress of the illness is very slow, a "galloping" type the course of which is rapid, and a mental type which tends to dementia. The prognosis varies with the type of the disease.

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[1] THE LANCET, Jan. 24th, 1903, p. 257.

OBSERVATIONS UPON LONG-DISTANCE RUNNERS.

THE *Boston Medical and Surgical Journal* of Feb. 19th contains an interesting series of papers on observations upon long-distance runners which are edited by Dr. J. B. Blake and Dr. R. C. Larrabbee. The Boston Athletic Association holds an annual "Marathon race"—i.e., a foot-race with a course equal to the distance from the battlefield of Marathon to the Stadium in Athens—about 24 miles. The following are the results of a large number of careful observations made after the races of 1900, 1901, and 1902. After the race the pulse was always increased but the increase was often surprisingly small. It was least in the best-trained men and in those who finished slowly. Rates varying from 82 to 180 were recorded. Moderate irregularity was not infrequent. The tension was very low and dicrotism was sometimes present. In cases of severe fatigue there was a small "thread-like" pulse. The competitors lost weight to the extent of from 3 to 6 pounds. The temperature in the mouth was sometimes raised, often normal, and occasionally subnormal. But the rectal temperature was almost invariably raised and varied from 100° to 104° F. The variability of the temperature in the mouth is explained by the mouth-breathing which all violent exertion causes. The difference between the oral and rectal temperatures was often as great as 7°. Examination of the blood showed invariably a leucocytosis which varied between 14,200 and 27,700. The greatest increase was in the polymorphonuclear leucocytes. The percentage of large forms as compared with small ones was invariably increased Eosinophiles were decreased, both absolutely and relatively. In seven out of nine cases a few myelocytes were found. The leucocytosis was thus of the inflammatory type (in which the increase is wholly or mainly in the polymorphonuclear neutrophiles), in contra-distinction to the physiological leucocytosis observed during digestion and pregnancy and after moderate exercise, cold baths, or massage (in which the percentage of the different varieties of leucocytes remains unaltered). Before the race the heart was invariably found to be enlarged; this was due mainly or wholly to hypertrophy the result of training. After the race there was slight further enlargement which was inferred to be the result of acute dilatation. In some cases murmurs were heard before the race and were thought to be due to excitement. Murmurs also developed during the race. Thus of nine cases in which no murmur was heard before the race murmurs were heard after it in six. Of these murmurs three were cardio-respiratory, ceasing on holding the breath. The other three were apical systolic. Whether they were due to temporary mitral regurgitation from relaxation of the mitral orifice could not be determined. The changes in the urine are of great interest. The colour was always higher than before the race; often the urine was slightly turbid and sometimes it was smoky. The acidity was markedly increased. The changes in the specific gravity were inconstant; in the majority of cases it was diminished. The amount of urea excreted in the 24 hours after the race was not increased; on the contrary, it was sometimes diminished. These results are in accordance with the researches made by Fink and Wislicenus in their ascent of Faulhorn and with the later work of Voit and Parkes. The excretion of uric acid appeared to be diminished in the majority of cases. The chlorides were constantly diminished to the extent of about 50 per cent. A trace of albumin was invariably present and persisted in most cases for at least 36 hours. All the sediments contained large numbers of hyaline and finely granular casts and a few coarsely granular and epithelial casts. Blood was always present—free and on the casts. Brown granular casts were rarely found. Calcium oxalate crystals were present in most cases. Spermatozoa were observed in several cases.

SMALL-POX AND THE CORPORATION OF DUBLIN.

IN THE LANCET of March 28th, p. 905, we mentioned that an outbreak of small-pox had occurred in Dublin. The public health committee, with an activity which is worthy of praise, took steps to limit the severity of the outbreak by a system of isolation, of removing "contacts," and of vaccinating them. Unfortunately, however, the zeal of the public health committee was like that attributed to the Jews by the Apostle Paul—namely, zeal not according to knowledge. At the meeting of the North Dublin board of guardians held on March 25th and reported in the *Dublin Telegraph* of that date a report was read from Mr. David Fagan. This report stated that Mr. Fagan had been informed that various persons since they had been discharged from the Dublin Corporation Refuge, whither they had been taken while their rooms, clothing, and the like were being disinfected, had had no food. No one would give them work and the guardians of the poor said that they could not grant relief, for that it was the duty of the corporation to do so. Mr. Fagan managed to give them food and firing on his own responsibility. This state of things is bad enough, but it is as nothing compared to the treatment which the unhappy "contacts" received in the refuge. From a sworn statement made before Mr. W. L. Kenny, K.C., deputy divisional magistrate, which sworn statement was incorporated in Mr. Fagan's report, we learn that the deponent, a man, together with his wife and an infant, aged six days, were removed to the refuge on March 7th. Their clothing was all taken away. The deponent, his wife, and the baby were allotted one room; in the three other rooms were huddled together over 40 persons, members of 11 families. The only clothing they had was a blanket taken from the bed. Men, women, and children were all mixed up together in this practically nude state, and deponent said that he saw a girl go down to the kitchen to be vaccinated with nothing on but a blanket. Men walked about the rooms completely naked and drunk. The guardians considered that the matter should be referred to the Local Government Board. If these statements are true we have no hesitation in saying that the matter is an absolute and crying disgrace to all concerned. We say, "if they are true," for Sir Charles Cameron, the superintendent medical officer of health, declared on being interviewed that the statement was a gross exaggeration. He did not deny, however, that no clothing was given to the "contacts" to wear while their own rags were being disinfected, but he said that they had to remain in bed while the disinfection was proceeding. There also seems to be no doubt that many "contacts" got drunk, and Sir Charles Cameron allowed that they were supplied with wine, stout, and whisky. This we should call an error of judgment. Moreover, we think that the guardians were to blame for not seeing that the poor for whom they are responsible were supplied with food after leaving the place euphemistically called a "refuge." Segregation of "contacts" is a good thing, revaccination is also a good thing, but if the corporation of Dublin thinks that measures undertaken in the way that we have quoted, or even in the modified manner described by Sir Charles Cameron, will make people pay more attention to hygiene, will improve the status of the poor, or will make them value vaccination more highly, the sooner it is taught differently by as sharp measures as possible the better. We await with interest the action of the Local Government Board.

THE FUTURE OF ST. GEORGE'S HOSPITAL.

THE following fly-sheet is being circulated amongst the governors of St. George's Hospital:—

St. George's Hospital, S.W., March 26th, 1903.

The governors of St. George's Hospital who were present at the recent court held at Grosvenor House would appear to have carried away an erroneous impression to the effect that a large majority of the medical and surgical staff are in favour of the removal of the hospital *under any circumstances. The undersigned members of the staff wish to* state that this is not the case and that they are not in favour of removing the hospital under any circumstances *unless* such a sum of money can be obtained for the present site as will suffice to build and equip a perfect modern hospital of not less than 360 beds on a suitable site; to build and equip a thoroughly up-to-date medical school; to provide a nursing home; and to increase the endowment of the hospital sufficiently to meet all such additions to expenditure and all such loss of income as may be incurred by removal.

Failing these conditions they are in [illegible] deavour to raise sufficient money either (1) to [illegible] present site and such land as may be obtain[illegible]ghbourhood; or (2) to purchase such adjoining land as may be available and to bring the present buildings as far as possible into line with modern requirements.

(Signed)

Wm. Ewart, M.D., Senior Physician; F. G. Penrose, M.D., Physician; H. D. Rolleston, M.D., *Physician*; *Wyndham Cottle, M.D., Physician for Diseases of the Skin; F. W. Hewitt, M.D., Physician Anæsthetist; *Lee Dickinson, M.D., Senior Assistant Physician; Cyril Ogle, M.B., Assistant Physician; Arthur Latham, M.D., Assistant Physician and Dean of the Medical School; Arthur Stabb, M.D., Assistant Obstetric Physician; *G. R. Turner, F.R.C.S., Surgeon; A. Marmaduke Sheild, F.R.C.S., Surgeon; W. Adams Frost, F.R.C.S., Ophthalmic Surgeon; W. C. Bull, F.R.C.S., Aural Surgeon; Herbert W. Allingham, F.R.C.S., Senior Assistant Surgeon; F. Jaffrey, F.R.C.S., Assistant Surgeon and Dean of the Medical School; Herbert S. Pendlebury, F.R.C.S., Assistant Surgeon; H. B. Grimsdale, F.R.C.S., Assistant Ophthalmic Surgeon; Norman G. Bennett, M.B., Assistant Dental Surgeon.

* These members are only in favour of the two last clauses.

At the present time the active medical and surgical staff of the hospital consists of 22 members, of whom 18 have now declared that unless an almost ideal set of conditions should prevail to alter their views they are not in favour of moving the hospital from its present site. This consensus of opinion cannot fail to be influential.

THE SALE OF POISONS.

WE have received a copy of a Bill which has been introduced into the House of Commons by Mr. Thomas Lough, M.P. for West Islington, and which is backed by Mr. John Burns, Mr. J. Henniker Heaton, and others. The objects of the Bill are good and may be shortly summarised as tending to check the abuses which are at present connected with the sale of poisons. The main point of the Bill is contained in the two following clauses:—

1. In this Act "*the society*" *shall* mean "the Pharmaceutical Society of Great Britain," "registered person" shall mean a "pharmaceutical chemist or a chemist and druggist," "poison" shall mean a poison within the meaning of the Pharmacy Act, 1868, "registrar" shall *mean the registrar of the society.*

2. From and after Dec. 31st, 1903, it shall be unlawful for any person or any company, firm, [illegible] persons to keep any open shop or shops fo[illegible] compounding of poisons or of medical [illegible] shall be *bonâ fide* conducted by a registered person, or to permit or suffer in such shop any poison to be retailed or any medical prescription to be retailed, dispensed, or compounded otherwise than by or under the supervision of a registered person; also it shall be unlawful for any person or any company, firm, co partnership, or body of persons to keep any such shop unless the address of the shop shall have been registered upon the register of shops to be kept under this Act and the name and address of the registered person to be in the *bonâ-fide* conduct of the shop shall have been registered upon the register of persons in the *bonâ-fide* conduct of shops to be kept under this Act, and also it shall be unlawful for any person or for any company, firm, co-partnership, or body of persons to sell or to negotiate or participate in the sale by retail of any poison at or upon any place other than an open shop registered upon the said register of shops.

3. The address of the registered shop whereat a sale of poison takes place shall be the address of the seller for the purpose of the labeling required by Section 17 of the Pharmacy Act, 1868.

We do not see, however, in this Bill as drafted any clause whereby the rights of medical men to dispense their own medicines, either themselves or through the agency of a qualified dispenser, are to be preserved and one should certainly be added. Moreover, we think that the provisions of the Pharmacy and Sale of Poisons Acts should no longer be able to be evaded, as they are now in the case of chlorodyne, by the simple method of placing a 1½*d.* Government stamp on the bottle. But we have every wish to place the sale of poisons under strict control and cordially agree with the authors of the Bill that companies should be brought within the provisions of the law.

THE MODE OF ACTION OF SUBCONJUNCTIVAL INJECTIONS.

AN interesting address on this subject has been recently delivered by Dr. Karl Wessely to the Natural History Society of Carlsbad. It has been fully reported in the *Deutsche Medicinische Wochenschrift* of Feb. 12th and 17th. Dr. Wessely's experiments were made upon rabbits and consisted in injecting beneath the conjunctiva solutions of various strength of sodium chloride and other salts and watching carefully their effects. The practice of subconjunctival injections has been employed and sometimes found useful in the infectious processes which occur after operations and wounds, in diseases of the cornea, in cases of acute and chronic iritis, in various forms of choroiditis, in detachment of the retina, in opacities of the vitreous, and in chronic degenerative processes such as retinitis pigmentosa. His experiments have satisfied Dr. Wessely that subconjunctival injections do not act through their osmotic power on the internal humours of the eye, since analyses have proved that their penetrating power is very small, that they do not produce their effect by acting as lymphagogues, nor, so far as regards sodium chloride injections, by any direct action in setting free leucocytes. They really act as powerful local stimuli to the conjunctiva which, even when frequently employed, have no injurious effects. The nerves of the conjunctiva thus energetically stimulated act in a reflex manner, presumably through the vaso-motor nerves on the vessels of the adjoining vascular territory, leading to the dilatation of the ciliary area. The hyperæmic condition of the ciliary vessels renders their walls more permeable and the result is the secretion of aqueous humour containing much albumin in place of the normal aqueous which contains none. Having determined these points experimentally Dr. Wessely proceeds to consider whether the effects of these injections are really serviceable and in what way they act and observes in the first place that we have long been accustomed to regard all the processes accompanying inflammation as constituting safeguards to the organism. Amongst others the œdema that accompanies inflammation has been so regarded without any precise reason being given for its efficacy. Bacteriological researches have, however, shown that the serum of normal blood contains several protective materials which play an important part in the strife against the lower organisms, and, moreover, that these materials, to which the names of bacteriolysin, agglutinin, hæmolysin, and precipitin have been applied, are in all probability associated with the albumin of the serum. The question immediately arose whether as the normal aqueous humour of the eye is almost destitute of albumin, whilst that secreted after subconjunctival injections contained a notable proportion of albumin, the beneficial effects observed might be due to the presence of ferments, enzymes, or solvents eliminated with it. Experiments made with animals rendered immune with the blood of the ox showed that the normal aqueous humour has no power of dissolving bovine blood corpuscles and hence contains no hæmolysin. But if a subconjunctival injection were made of a 5 to 10 per cent. solution of common salt, and after the lapse of half an hour the aqueous was withdrawn, it quickly dissolved an equal volume of a 5 per cent. mixture of blood corpuscles—a very interesting result—and still other experiments demonstrated clearly that the power of solution in the newly secreted aqueous was in direct proportion to the amount of albumin that the fluid contained.

THE MEDICAL REGISTER FOR 1903.

THE Medical Register for 1903 contains 1690 pages, as compared with 1647 last year. The foreign list, which was a new feature last year and then contained only one name, now contains five. On p. 76 of the Register is given a table showing the total number of medical men whose names are included in the Register on Dec. 31st in each year. On Dec 31st, 1902, there were 37,232 names. On Dec 31st, 1901, there were 36,912 names, and since then 1275 new names have been added, 96 restored, and 1051 removed, constituting a net gain of 320. The average number of names on the Register for the last five years is stated to be 36 279, so that the present number now exceeds that average by 953. Of the 1051 names removed, 700 were removed on evidence of death, 345 under Section XIV. of the Medical Act, and six under Sections XXVIII. and XXIX. of the Medical Act. Notwithstanding the fact that 700 names are stated to have been removed from the Register during the year on evidence of death—which is the highest number for 17 years—we have found, on comparing the Register for 1903 with the first 100 names in the obituary list at the end of the Medical Directory for 1903, that 12 of those names are still on the Register. As there are 607 names in the obituary list of the Medical Directory we hope that we may not assume that 72 names of deceased medical men are still on the Register for 1903. This is a very often-debated matter in these columns, but it does no harm to refer to it again, for the accuracy of the Medical Register is a matter in which the whole medical profession is profoundly interested. The name of a deceased member of the medical profession must be allowed to stand on the Register till complete evidence of his death is forthcoming; at the same time use might be made of the better information apparently at the disposal of the Medical Directory, and the deaths announced in that excellent book of reference might very well be inquired into by the registrar for purposes of verification. The presence on the Register of the names of dead persons is a real source of danger to the public. We notice that in two cases of medical men attached to the medical department of the King's household and of the Royal Family their titles are not included in the Register, although the titles of all the others are. We also observe that several errors have been made in the addresses. For instance, Edgbaston is called "Egbaston" and Sloane is called "Solane," and has been so printed for at least three years, and, further, the medical man in whose entry this slip occurs does not now live there. Cockfield is called "Cochfield," Pietermaritzburg is called "Pietermaritzberg," Rustenburg is described as in the "South African Republic," and Oulart is called "Outlart." But there is no need to multiply examples, which could probably be done, as our remarks are the result of only a few minutes' scanning of some of the pages. We are not making an attempt to find fault and we are quite aware of the immense amount of work that goes to the making of the official roll of the medical profession. Therefore we do not labour the points that we think might be urged against the compilation as a gazetteer or as a guide to the quick and the dead. There is no doubt that the Medical Register has become a vastly more accurate volume during the last two years than it was previously.

STREET NOISES.

EVERY year with the opening of the racing season the "winner" yeller wakes from his winter torpor and makes day and night hideous with howls like those of a banshee. The police, as represented by Sir Edward Bradford, and the London County Council, have both issued orders to deal with this nuisance, but they are fenced about with such absurd regulations that they are of no use. How can a busy man whenever he hears a "runner" be expected to leave his work, rush downstairs, keep one eye on the "runner," and look for a policeman with the other? But supposing that a constable is found simultaneously with the "runner" being near the only thing is that the latter's address is taken. He is then summoned and probably does not attend the summons. Even if he does more disturbance to work is caused by the annoyed citizen having to attend the court and most probably the "runner" is fined 6*d*. or some entirely inadequate sum. What is wanted is for the police to have power forthwith to arrest any newsmonger who shouts. The London County Council has just increased its rate. It is only fair that it should do something to urge upon the Home Office that the police should be enabled to control a nuisance which has become perfectly unbearable. The nuisance is most acute on the day of a big race and if only the police authorities would on the day of, say, the "City and Suburban" station a plain-clothes man at the bottom of Bedford-street, Strand, with directions to take a note of the number of "runners" who yell perhaps even the official mind would be stirred to desert its attitude of Gallian indifference.

THE NEW PAPYRUS OF TIMOTHEOS OF MILETUS' POEM ON THE PERSIAN WAR.

CERTAINLY up to the present time *few* more precious relics of ancient literature have been found preserved for us by the perfection with which the Egyptians carried out their burial rites than the magnificent poem of Timotheos of Miletus contained in a papyrus found last year in a sarcophagus beside a body at Abusir. Such a subject may perhaps be deemed extraneous to the contents of a medical journal, but that is hardly so in such a special case as this. Any really elevated and exquisite production of the poetic fancy such as this is calculated to be a mental consolation and thus a physical assistance to many a jaded, overworked citizen subject to the tension of modern life as well as to the actual invalid. *To the medical* man who turns from his weary round for some change of thought a masterpiece such as this, if he still retains his scholarship, will be a literary pleasure and for the benefit of those who have forgotten their Greek it may be expected that a translation will soon be forthcoming. It would be singular, if it is true as has been alleged that the poetic genius of the race shows sinister signs of diminution in recent years, that the balance should be redressed by the recovery of masterworks of the classic muse. Within something like a decade the lost poems of Herondas, Bacchylides, and now the great ode of Timotheos have been restored to us and it is not too much to anticipate that these are but precursors of a greater harvest.

THE PRODUCTION OF ARSENICAL GASES BY LOW ORGANISMS.

IT is curious and not a little startling that the fungus concerned in forming the green mould on cheese or on jams is an arsenic eater, and there can be little doubt that this power of certain low organisms of assimilating arsenic has in some cases accounted for the poisonous symptoms ensuing upon sleeping in rooms furnished with arsenical wall-papers. It has been shown that many of the moulds when placed in suitable nutrient fluids containing arsenic will gradually assimilate the arsenic, ultimately expelling it in the form of arsenical gas. In this way a comparatively inert arsenical compound may be converted into a powerfully poisonous gas. The action of the fungus may easily be demonstrated. For example, if a raw potato be taken and a very weak arsenical fluid be brushed on its freshly cut surface and inoculated with one of the arsenic-assimilating moulds, such as the common penicillium glaucum or the mucor mucedo, a persistent odour will sooner or later be developed unmistakeably like garlic which is due to the evolution of arsenical gas. A sop of bread may be substituted for the potato and is said to give even more marked results. So readily do these fungi select the arsenic that they have been employed, so to speak, as detectives of the poisonous metal when present in quite minute quantities. In fact, these low organisms have been employed in toxicological investigations, the test, it is stated, being more delicate than chemical methods. In the same way the presence of arsenic may be detected in wall-papers, in dye-stuffs, or other fabrics which may be examined directly without the preliminary trouble of destroying the organic matter, which is often necessary in chemical methods.

THE HEALTH OF WAGNER.

IN a leading article which appeared in THE LANCET of March 7th, p. 672, we discussed the theory put forward by Dr. G. M. Gould of Philadelphia as to the relation between dyspepsia and eye strain. Dr. Gould took as instances the following five well-known workers, all of whom suffered from dyspepsia—De Quincey, Carlyle, Darwin, Huxley, and Browning—and maintained that they all suffered from some error of refraction. Mr. W. Ashton Ellis, M.R.C.S., is now issuing an English version of Herr Glasenapp's "Life of Richard Wagner," although he has added to the original German some interesting details founded upon lately discovered Wagner records. In Vol. III., a book of some 500 pages representing but 100 of Herr Glasenapp's work, we find many allusions to Wagner's state of health. He seems to have suffered much from dyspepsia, together with all the troubles attendant on the toxæmia set up by that condition, and in particular we note that while he was writing the *Niebelungen Ring* he complains of constant headache. Mr. Ashton Ellis considers that this headache was due to migraine, and certainly the symptoms of which Wagner complained were very much those of migraine, although he talked about the pain being "like a sharp knife cutting into the nerves of my brain." In the experience of most people, however, the migraine pain is more like a blunt nail being driven into the head. Errors of refraction are a well-known cause of migraine and it is quite possible that Wagner suffered from such errors. Migraine, however, is common in highly wrought persons of the artistic temperament, and Wagner lived his life to the full and was moreover by no means a normal person. Poet, dramatist, revolutionist, a musician without compeer in his own particular line, one with a mastery of the orchestra comparable to that of Swinburne over words and rhythms or of a mediæval architect over stones and the intricacies of tracery and groining, what wonder that the mere physical body sometimes gave way under the nervous strain with which Wagner's art treasures were produced.

A STRANGE METHOD OF COMMITTING SUICIDE.

IN a leading article which appeared in THE LANCET of Oct. 5th, 1901, p. 921, entitled "Peculiar Methods of Suicide," we mentioned the case of a man who killed himself by means of an ingeniously constructed guillotine. A similar case has recently been reported from Rheims. A man procured a spade, sharpened the edge, and fixed the implement, blade downwards, to the end of a carpenter's bench which he weighted heavily. He then placed a block of wood under the same end of the bench in such a fashion that the block could easily be removed and so let the bench fall together with the sharpened blade. When these preparations were completed the man lay down and placed his neck on a thick piece of wood directly under the spade and knocked the supporting beam away with the result that he was immediately decapitated.

ON ASPIRIN AS AN ANALGESIC IN CARCINOMA.

IN the *Allgemeine Wiener Medizinische Zeitung* of March 17th Dr. Gustav Breuss of Vienna strongly recommends the use of aspirin for the relief of pain in inoperable carcinoma. Numerous observations have been made on the analgesic effect of aspirin in neuralgias and other painful affections, but only very few on its use in carcinoma. Dr. Witthauer[1] gave doses of one gramme of aspirin once or twice daily in three cases of inoperable carcinoma with beneficial results. Dr. Merkel obtained good results in a case of severe rectal carcinoma by the administration of four grains in small doses, and several other observers agree as to its usefulness in uterine carcinoma. Dr. Breuss has made a trial of it in several cases, chiefly of this last disease, and has been in all cases gratified by the result. He uses one-gramme powders and administers two or three daily. He believes that it postpones the ultimate use of morphia injections very considerably and even when these are unavoidable renders a smaller quantity effective.

THE DANGERS ATTACHING TO THE PERSISTENCE OF MECKEL'S DIVERTICULUM.

THE diverticulum of Meckel, the persistent vitelline or omphalo-mesenteric duct, is found in no small proportion of cases, but fortunately it is only rarely that harm results from its presence, for at many a necropsy it is discovered when the history makes it clear that it has never given rise to any symptoms. In two or three ways this "vestige," however, is dangerous. When the diverticulum is unattached by its extremity it has but little tendency to produce any morbid effects, but if it is attached by the tip it may readily lead to acute intestinal obstruction by pressing on and constricting a coil of bowel. Many cases of this occurrence have been recorded and a large proportion end in recovery if an early laparotomy is performed for relief of the obstruction, for the patient is generally a youth or a young adult and stands the operation well. There is, however, another mode by which the diverticulum may cause symptoms. Should the finger-like process become inverted into the cavity of the ileum, it will in all probability act like a foreign body and will give rise to peristalsis, and the persistence of this peristalsis will lead to an invagination of the portion of bowel to which the abnormal process is attached, and thus an intussusception will be developed. The museum of the Royal College of Surgeons of England contains a specimen showing an inverted Meckel's diverticulum which led to a fatal intussusception. An instance of this rare cause of intestinal invagination is recorded in this number of THE LANCET and the successful issue was due to the early recognition of the intussusception by the medical man, Mr. E. L. Hunt of Shenstone, and the prompt operative treatment which was was adopted by Mr. H. G. Terry at the Bath Royal United Hospital. Mr. Carwardine has reported a case in which a still rarer morbid condition resulted from the presence of a persistent vitelline duct. A child died when three days old and it was found that a large Meckel's diverticulum existed and that this had become distended with meconium and had taken a twist of three turns, when complete intestinal obstruction had occurred.

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[1] Therapeutische Monatshefte, October, 1900.

A DISCUSSION will take place at the Hunterian Society upon the Present Methods of treating Tuberculosis on the evenings of Wednesdays, April 8th and 22nd, commencing at 8 30. On Wednesday, April 8th, an introduction to the discussion will be made by the President, Dr. Stephen H. Appleford. A debate on the Treatment of Tuberculosis in Sanatoriums compared to that in Private Practice will be opened by Dr. G. Newton Pitt; Dr. H. G. Felkin will open a debate on the Influence of Location; and Dr. T. N. Kelynack will open a debate on the Selection and Classification of Patients in Sanatoriums. On Wednesday, April 22nd, Dr. T. H. A. Chaplin will open a debate on Infection, Reinfection, and Multiple Infection; the Surgical Aspect of the Treatment of Tuberculosis will be discussed by Mr. W. Knight Treves; and Modifications with respect to Comfort, Exercise, Rest, and Recreation will be suggested for consideration by Dr. T. Glover Lyon. There will be an exhibition of plans and models of sanatoriums in the theatre of the London Institute, Finsbury-circus, E C., where the discussion will be held and where a lantern and screen will be available for the exhibition of slides.

THE reports by the chemist and the medical officer of health, together with a bacteriological report by Dr. F. W. Andrewes, on the condition of the atmosphere of the Central London Railway, have been printed for the London County Council and published this week. The conclusions are identical with those upon which we commented in our issue of Feb. 21st, p. 538. While the amount of carbonic acid gas considerably exceeds that found in the air above the ground the number and kind of organisms were practically the same as those in the outside air. There is no reference to the existence, origin, or nature of the peculiar sickly smell of the air in the tube.

Dr. J. McNaughtan, medical officer of the Scotch *Prison* Service, and Mr. N. A. Humphreys, the chief clerk to the Registrar-General's Department, have been appointed by the King as Companions of the Imperial Service Order in recognition of long and meritorious service in the Civil Service.

HIS MAJESTY THE KING has acceded to the request of the board of management of the National Hospital for the Paralysed and Epileptic (Albany Memorial), Queen-square, Bloomsbury, to accord his patronage to the charity.

Professor W. A. Tilden D Sc., F.R.S., has been elected President of the Chemical Society.

THE ROYAL NAVY MEDICAL SERVICE.

THE First Lord of the Admiralty, Lord Selborne, distributed the prizes on March 31st, at Haslar Hospital, to the successful candidates in the instructional course at the Royal Navy Medical School. The ceremony took place in the library attached to the museum and the company numbered about 70, chiefly composed of the student surgeons and of the medical officers from the various establishments in Portsmouth harbour, from the harbour ships, and from the Marine depôts.

Sir H. F. NORBURY, Director-General of the Medical Department of the Royal Navy, said that they were all glad to welcome Lord Selborne at Haslar Hospital and proceeded to read the report of the inspector-general on the work and conduct of the students who had attended the course of instruction at the school. He was glad to say that the sum total of the marks gained compared favourably with the totals recorded on former occasions.

Lord SELBORNE then presented the gold medal and a microscope to Surgeon M. J. Laffan, and the silver medal and some books to Surgeon A. D. Spalding.

Lord SELBORNE then proceeded to address those present and said: It has been the greatest pleasure to me to come here to-day to give away the prizes at the end of this course The Haslar Naval Hospital is the headquarters of the medical department of the navy, and I always think that one of the great glories of the naval service is that it takes to itself all the other great professions—the priest, the soldier, the engineer, and the surgeon—and gives to each of them a blend of the sea in addition to his own peculiar professional qualities, and in every sense he is the better for this blend of the sea. Sometimes I am told that although a man may be the better for it he is handicapped in his professional career by the absence of certain opportunities. Now, to take the case of the medical officer, I quite admit that in the navy you will not have *all those opportunities for constant observation and* varied practice which your friends, the civil practitioners, may have. I also admit that in going into the navy you are abandoning the chance of those great prizes and of the wealth which the more fortunate medical man in civil practice may acquire But remember that it is not always the man who deserves success who obtains it and there is many a clever medical man in civil practice who has never yet achieved that wealth which his real ability with opportunity should have enabled him to attain. There are many qualities that make for success, which is achieved not by ability alone but by a combination of many qualities and also by luck. In deliberately exchanging this chance by entering the naval service you know that you have achieved for yourself a perfect certainty of position. You have looked forward into the future of your life and know exactly what your life can be. You can say to yourself, "If I choose I can serve my country with great honour to myself and advantage to the service" You leave care in its strictest sense behind you and you know what the future will give you If you have the merit you can achieve great honour for yourself and your family. Perhaps the Admiralty has not done all that it might have done in the past towards enabling the naval medical man to keep pace with the scientific progress and advance of medicine, but there has been great difficulty in the matter owing to the shortage of medical officers. The navy has expanded by leaps and bounds. Nearly 130,000 men will be voted for the navy next year, whereas they had only 60 000 15 years ago. It has been difficult for the medical department of the navy to keep pace with this great expansion, and it has followed that there has not been the number of officers to make it possible for the Admiralty to give the study leave between commissions which I admit frankly is essential if an officer is to keep abreast with the scientific advances in his profession. But it is very little after all that the Admiralty can do for them because a man is really what he makes himself and not what the Admiralty makes him or any other body of people can make him. What you have to ask yourselves all through your professional life is this: "I know the disadvantages which I suffer from in comparison with my civilian friends, but am I using all the advantages I have?" How many of your civilian friends will have the opportunities of study that you will have? If you choose you can use the time at your disposal to keep yourself abreast of advances in medicine by reading the literature of your profession. Again, you will have very peculiar opportunities of observation which are denied to your civilian friends at home. Your special service will give you special opportunities. I sometimes wish very much that the great triumphs of Manson and of Bruce had been naval triumphs and whether they were to have a naval conquest of that sort was as open to the naval officer as it was open to Dr. Manson. We are only at the beginning of our knowledge in these matters and although you will not have those opportunities of constant study into the mystery of cancer which your friends at home will have yet there is the almost equal mystery of Mediterranean fever which the civilian at home will not have the opportunity of studying and which is a world of science for you to conquer. You know what work has been done at Haslar and at Malta—and I may say that at those places perhaps more has been learned in respect of the true knowledge of Mediterranean fever than in any other laboratories in the world; still the opportunities that you have of studying this subject are very great and you know much better than I do how much greater they are. Apart, however, from these special opportunities of study I want each of you officers entering the naval medical service to remember that it is your duty by every suggestion that you can make to contribute to the welfare of the service and the advancement of medical science. Do not think that suggestions are not welcome. In my opinion, the man who shuts his ears to suggestions is a fool; the man who is successful in his work, who gets the reputation of always being able to overcome the difficulties of the moment, who has a reputation for resourcefulness, is in nine cases out of ten a man who opens his ears to any suggestions that others may bring him. I could not do my work as First Lord of the Admiralty for one week on my own brain. It is because I am only too glad—and my colleagues are only too glad—to have suggestions in regard to the solution of problems that the work is carried on. We never shut our ears to any suggestions whatsoever. Many suggestions doubtless are futile and also foolish, but if you are not prepared to listen to them you will not get the advantage of any good suggestion that may be offered. What I say is that it is the duty of everyone in responsible positions of authority to receive suggestions and it should be the ambition of all young officers to make suggestions, of course only after careful thought and accurate observation. If an officer makes random suggestions he is destroying, and deservedly so, his own reputation. The study of these questions applies to every department of the work that lies before you. Take the battleship, for instance, in which you will serve. There is a problem, as yet unsolved, that has puzzled the brains of the most capable and experienced officers—the problem of forecasting the conditions under which it will be possible to deal with the wounded in naval actions. No one quite knows, because the conditions will be so different from any of which they have had any experience. I was told only a day or two ago that Sir Frederick Treves had said about the war in South Africa that if a tent could be pitched over every wounded man where he fell and if he could be treated there the loss of life in war would be enormously diminished. The loss of life is from the moving of the wounded man and not so much from the wound received. In a battleship you have practically a tent over the man where he falls, but all the men could not be treated immediately. There would not, however, be all that difficulty in dragging him to a base hospital in a cart or heavy wagon causing him to be torn asunder with pain. The difficulty, however, remains of how the medical officer is to get at the wounded. I only put this forward as a kind of idea that occurred to me of the sort of problem I would try to solve if I were a naval medical officer. The King, the country, and the Board of Admiralty mean the navy to be the best navy in the world. That does not mean only the best ships and the greatest number of them but that every part of the navy shall be perfect in every part of its administration. Consequently the naval medical department must be perfect and that depends in the first place on the officers and then on the appliances which on their advice the Admiralty supplies. I consider it to be the duty of the Board of Admiralty to spare no money which the taxpayer will give to put everything at your disposal that science can suggest to make the naval medical service a pattern to all the medical services in the world. In conclusion I congratulate you, Staff-Surgeon Bassett-Smith, on the success of this course for which you are chiefly responsible, and I also congratulate you on your promotion which I now inform you that the Board of Admiralty has conferred upon you.

Sir HENRY NORBURY then proceeded to read the marks obtained by the student surgeons attending the instructional course.

Inspector-General R. W. COPPINGER, in charge of Haslar Hospital, then expressed the thanks of those present to Lord Selborne for his presence at the gathering.

Lord SELBORNE briefly replied, saying that he was much indebted to them for the kind invitation to be present.

The proceedings then terminated.

THE THIRD REPORT OF THE ROYAL COMMISSION ON SEWAGE DISPOSAL.

As shown in its third report just issued the labours of the Royal Commission on Sewage Disposal cannot be considered to be near the end. In fact it is obvious that the Commissioners find that the scope of their inquiry widens as their investigations are pursued. The contamination of oyster beds is a case in point. It is equally obvious that they are gathering information of the most valuable kind and that the members are a very capable body of men who mean to make their inquiry as thorough as possible. It will be remembered that the Commission was appointed in 1898 "to inquire and to report what methods of treating and disposing of sewage may properly be adopted." Three years after this appointment was made an interim report was issued which was dealt with in a leading article in THE LANCET of August 10th, 1901, p. 376. In this report the Commissioners felt justified in concluding (1) that peat and stiff clay land are generally unsuitable for the purification of sewage; (2) that it is practicable to produce by artificial processes alone, either from sewage or from certain mixtures of sewage and trade refuse, effluents which will not putrefy (this conclusion led to the Commission expressing the opinion that under proper safeguards the present rule as regards the application of sewage to land might be modified); and (3) that the creation of a separate commission was demanded or a new department of the Local Government Board which shall be a supreme rivers authority dealing with matters relating to rivers and their purification. In the second report the methods of bacteriological analysis adopted by the Commission were described and at the same time the importance of bacteriological examination was emphasised in view of the fact that though purification of sewage was undoubtedly effected by bacterial agencies, yet the resulting effluents were not bacteriologically satisfactory owing to the presence in them of large numbers of organisms of the colon series.

The third report deals with some very important aspects of the inquiry. In the main it relates to the question of the disposal and treatment of trade effluents. It is well known that sewage containing trade effluents is generally more difficult to purify than is ordinary sewage. The Commission finds that these difficulties arise from the fact that trade effluents may be turned into the sewer at irregular intervals and that they may contain large quantities of solid matters in suspension which tend to choke the purification plant and that they may be very acid or very alkaline or otherwise chemically injurious. In spite of these facts, however, the results of practical inquiry "fully support the view that it is practicable in the great majority of cases to purify mixtures of sewage and trade effluents if the manufacturers adopt reasonable preliminary measures." The conclusion follows that the law should be altered so as to make it the duty of the local authority to provide such sewers as are necessary to carry trade effluents as well as domestic sewage and that the manufacturer should be given the right, subject to the observance of certain safeguards, to discharge trade effluents into the sewers of the local authority if he wishes to do so. There are cases, however, in which the local authority should obviously be relieved of this duty—as, for example, when the effluent discharged from the manufactory is of a composite character, the greater part of which might with advantage be easily dealt with by the manufacturer if it were keep separate. It is undoubtedly difficult to generalise upon this matter and therefore it is suggested that in individual or special cases the only solution of the problem would be the appointment of some tribunal which would be empowered to settle any differences arising between the local authority and the manufacturer. There is no doubt that money now wasted over prolonged litigation would be more than sufficient to pay the expenses of a [illegible] such a tribunal would be [illegible] machinery for the settle[illegible] authorities and manufacturers is not only unsatisfactory but costly. The law courts have over and over again been shown to be unsuitable for the determination of these questions. [illegible] recommendation [illegible] central authority [illegible]fferences between [illegible]. It is proposed [illegible]d possess its own laboratory [illegible] officers (1) an administrative [illegible]ng special knowledge of the bacteriology of sewage, trade effluents, and water-supply; (3) a chemist having special knowledge of the chemistry of the same; and (4) an engineer having a special knowledge of geology and water-supply. It is also proposed that an epidemiologist should be added to the staff of the central authority in connexion with the pollution of rivers and the protection of sources of water-supply. In fact, besides the question of settling disputes as to the discharge of waste and sewage into sewers and rivers the central authority, it is suggested, should exercise a general superintendence over the whole country in regard to the prevention of the pollution of water.

The Commissioners are continuing their investigations in regard to a number of artificial processes of dealing with the disposal of sewage. They are also investigating the question of the discharge of sewage, sewage effluents, and [illegible]aters with especial [illegible]sh. Again, investi[illegible]pose of ascertaining [illegible] possibly dangerous micro-organisms which are common in sewage effluents in those instances in which they are discharged into a river from which water for drinking is drawn. Finally, the methods available for the satisfactory disposal of industrial effluents when not mixed with ordinary sewage are shortly to receive consideration. We doubt whether a Royal Commission has ever before faced a more intricate subject or one developing more paths of investigation than that which is [illegible]te in all [illegible]ms. Its [illegible] original research.

MEDICINE AND THE LAW.

An Employment of Children Bill.

A BILL of some importance has been introduced in the House of Commons with a view to making better provision for regulating the employment of children, where it has not been already regulated by Act of Parliament. This is a Government measure introduced by the Home Secretary. It is proposed that the objects of the Bill should be mainly carried out by county and borough councils, to which large [illegible]-laws within their juris[illegible]ons or to any specified [illegible]low which children are [illegible] hours of employment. These by-laws may also prohibit absolutely or permit subject to conditions the employment of children in any specified occupation which may be shown to be dangerous to health or to morals. It is further forbidden by the Bill itself, as distinct from the by-laws to be made by local councils, that children should be employed at night or when under 11 years of age for the purposes of street trading, or for lifting heavy weights likely to injure them, or, generally, in any occupation likely to be injurious to the life, limb, or health of the child, regard being had to his physical condition. County and borough councils are empowered to make by-laws to regulate street trading by persons under 16 years of age, but for the general purposes of the Bill, and subject to specified exceptions, a child is defined as one under 14 years of age. Provision is made for the submission of by-laws to the Secretary of State and for enforcing by suitable penalties the Bill and by-laws made under it. Fines are provided for those who employ children in contravention of this Bill, for parents and guardians who knowingly permit such employment, and in the case of persons under 16 years of age trading in contravention of by-laws the offender may be fined or, if under 14 years of age, may for repeated offences be sent to a reformatory. From the brief outline thus given it will be seen that this Bill, though possibly open to criticism and amendment, is one which merits serious attention from all those to whom the morals and health of the young are matters of interest and solicitude.

Another Vaccination Bill.

Besides the Bill introduced by Mr. Channing to provide that no prosecution under the Vaccinaton Acts shall be held without the authority of the guardians, another—inspired by similar sympathies and prejudices—would enact that: "From and after the passing of this Act no parent or person having the custody of a child shall be compelled or ordered to vaccinate such child by any justice, court, or other person, having authority hitherto, to so compel or order; and so much of Sections 29 and 31 of the Vaccination Act of 1867 as enacts that any parent or person having the custody of a child shall be compelled or ordered as aforesaid is hereby repealed." For this legislative effort Mr. Broadhurst is responsible. It is backed by Mr. Thomas Bayley, Sir John Rolleston, Mr. Channing, and Mr. Corrie Grant.

Grocers' Licences.

A large number of the private Bills introduced in the House of Commons relate to matters indirectly of interest to the medical profession, such as those which refer to the housing of the working-classes and to the drink question. Of those which deal with the latter topic two have for their object the freeing of tied houses and one aims at doing away with what are known as grocers' licences in Scotland. The dangers which have arisen, particularly with regard to women, through the sale of wines and spirits by grocers and provision dealers are too well known to require recapitulation. The Bill in question recites in its preamble that "the combination of the grocery and spirit trade in Scotland has been productive of great evil," and proposes to forbid the granting of licences to grocers and provision dealers and the carrying on of grocery and provision businesses by licensed persons after specified dates in the year 1905. The Bill is brought in by Sir John Leng and is backed by Mr. Crombie, Mr. Dalziel, Mr. Pirie, and Mr. Hunter Craig.

A Criminal of Doubtful Responsibility.

Dr H. Crutchley of Alsager has written a letter to the *Staffordshire Sentinel* calling attention to the conviction of a man named Bagnall upon his own confession at the Staffordshire assizes for a serious assault. The prisoner was apparently employed at a pottery and it was the duty of the person assaulted (Mr. Gater) to superintend his work. Mr. Gater found fault with some jug handles and having turned away was violently attacked by the prisoner who threw jugs and moulds at him and also drew a knife. He then had a "seizure" or "fit" and when he became conscious again denied all knowledge of what he had done. Dr. Crutchley refers to the article, "Insanity and Epilepsy," p. 342, vol. viii. of Allbutt's System of Medicine, 1899, and [illegible] between the successive acts of [illegible] there detailed as preceding and [illegible]ommitted by epileptic patients. Dr. Crutchley makes out a strong case in favour of his view that Bagnall "was sentenced for an uncontrollable act committed when reason was dethroned," and expresses the hope that steps will be taken to obtain an alteration of the sentence of two months' imprisonment by questions in the House of Commons or by direct application to the Home Secretary. A difficulty would presumably arise in this case owing to Bagnall having, as Dr. Crutchley says, "been advised to plead guilty," which presumably means that, whatever his position may have been, he had the advantage of legal assistance and formally admitted his crime. We should be inclined to think, however, that the Home Office would give serious consideration to a communication with reference to a recently sentenced prisoner, supported by the opinion of a medical man having knowledge of the facts of his crime and trial, even in circumstance such as those described. Reference to the latest criminal statistics shows that in the year 1901 out of 791 criminal lunatics under detention 113 had been certified after conviction, and that on the Home Secretary's advice the prerogative of mercy was exercised by the Crown in 420 instances for various reasons. These figures would seem to show that the case of the condemned prisoner is not hopeless even after sentence has been passed upon him. It must be remembered, from another point of view, that if the prisoner serves his term of imprisonment the matter will be closed. This may be more satisfactory to him than the other courses which might have been adopted had the evidence been gone into.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8820 births and 4682 deaths were registered during the week ending March 28th. The annual rate of mortality in these towns, which had been 16·6, 17·2, and 17·0 per 1000 in the three preceding weeks, further declined to 16·2 per 1000 last week. In London the death-rate was 16·5 per 1000, while it averaged 16·1 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 6·3 in Handsworth, 6·7 in Hornsey, 8·7 in Grimsby, 8·8 in Walthamstow, 9 4 in Willesden, 9·8 in Wallasey, 10·6 in King's Norton, and 10·9 in West Hartlepool; the highest rates were 20·6 in Hanley and in Bootle, 20·8 in South Shields, 21·5 in Bury, 21·9 in Manchester and in Rotherham, 22·4 in Swansea, and 26·1 in Stockton-on-Tees. The 4682 deaths in these towns last week included 489 which were referred to the principal infectious diseases, against 501, 483, and 492 in the three preceding weeks; of these 489 deaths 157 resulted from measles, 121 from whooping-cough, 68 from diphtheria, 60 from diarrhœa, 35 from scarlet fever, 35 from "fever" (principally enteric), and 13 from small-pox. No death from any of these diseases was registered last week in Hastings, Brighton, Ipswich, Smethwick, or Grimsby; among the other towns they caused the lowest death-rates in Willesden, Plymouth, Preston, Halifax, and Leeds, and the highest rates in Croydon. Tottenham, West Bromwich, King's Norton, Wigan, Bury, Salford, Rotherham, Rhondda, and Swansea. The greatest proportional mortality from measles occurred in Croydon, Tottenham, West Ham, Devonport, West Bromwich, Kings Norton, Wigan, Salford, Tynemouth, and Swansea; from scarlet fever in St. Helens; from diphtheria in Hanley and Swansea; from whooping-cough in Croydon, Tottenham, West Bromwich, Leicester, Stockport, Wigan, Manchester, Oldham, and Rotherham; and from "fever" in Rhondda. Seven fatal cases of small-pox were registered in Liverpool, and one each in Walsall, Birkenhead, Bury, Manchester, Rochdale, and Blackburn, but not one in any other of the large towns. The number of small-pox cases under treatment in the Metropolitan Asylums hospitals, which had been six, seven, and seven at the end of the three preceding weeks, had further risen to 11 at the end of last week; five new cases were admitted during the week, against two in each of the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital at the end of the week was 1756, against 1790, 1798, and 1789 at the end of the three preceding weeks; 213 new cases were admitted during the week, against 193, 231, and 220 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 251, 258, and 282 in the three preceding weeks, declined again last week to 250 and were 203 below the corrected average number. The causes of 48, or 1·0 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Leicester, Nottingham, Salford, Newcastle-on-Tyne, and in 48 other smaller towns; the largest proportions of uncertified deaths were registered in Hanley, Birmingham, Liverpool, Sheffield, Rotherham, and Sunderland.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 18·5, 19·7, and 20·1 per 1000 in the three preceding weeks, declined again to 18·6 per 1000 during the week ending March 28th, but showed an excess of 2·4 per 1000 over the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 15·0 in Leith and 15·1 in Paisley to 19·8 in Glasgow and 21·7 in Dundee and in Perth. The 609 deaths in these towns included 37 which were referred to whooping-cough, 17 to diarrhœa, 12 to measles, five to "fever," three to scarlet fever, and three to diphtheria, but not one to small-pox. In all 77 deaths resulted from these principal infectious diseases last week, against 75, 67, and 68 in the three preceding weeks. These 77 deaths were equal to an annual rate of 2·4 per 1000, which was 0·7 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 32, 28, and 32 in the three preceding weeks, further rose last week to 37, of which 22 occurred in Glasgow, six in Edinburgh, five in Greenock, and two in Dundee. The deaths from diarrhœa, which had been 12 and 14 in the two preceding weeks, further rose to 17 last week, and included nine in Glasgow, four in Dundee, and two in Aberdeen. The fatal cases of measles, which had been 15 and eight in the two preceding weeks, increased again last week to 12, of which five were registered in Aberdeen, four in Edinburgh, and two in Glasgow. The deaths referred to different forms of "fever," which had been two, three, and five in the three preceding weeks, were again five last week and included three in Glasgow and two in Edinburgh. The fatal cases of scarlet fever, which had been four and six in the two preceding weeks, declined again last week to three and were all registered in Glasgow, where the three deaths from diphtheria also occurred. The deaths referred to diseases of the respiratory organs in these towns, which had been 97, 117, and 134 in the three preceding weeks, declined again last week to 100, and were 73 below the number in the corresponding period of last year. The causes of 16, or nearly 3 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 27·8, 26·6, and 27·7 per 1000 in the three preceding weeks, further rose to 29·3 per 1000 during the week ending March 28th. During the past four weeks the death-rate has averaged 27·9 per 1000, the rates during the same period being 16·6 in London and 19·7 in Edinburgh. The 213 deaths of persons belonging to Dublin registered during the week under notice showed an excess of 12 over the number in the preceding week and included 18 which were referred to the principal infectious diseases, against nine, 10, and eight in the three preceding weeks; of these, six resulted from whooping-cough, three from "fever," two from measles, two from scarlet fever, two from diphtheria. two from diarrhœa, and one from small-pox. These 18 deaths were equal to an annual rate of 2·5 per 1000. the death-rate last week from the same diseases being 2·1 per 1000 both in London and in Edinburgh. The fatal cases of whooping-cough, which had been two in each of the two preceding weeks, increased last week to six. The deaths from "fever," which had been two in each of the two preceding weeks, rose to three last week. The fatal cases of diphtheria, which had been two and three in the two preceding weeks, declined again to two last week. The deaths from diarrhœa numbered two last week, against one in each of the two preceding weeks. The 213 deaths in Dublin last week included 35 of children under one year of age and 59 of persons aged 60 years and upwards; the deaths both of infants and of elderly persons showed a slight decline from the respective numbers recorded in the preceding week. Four inquest cases and seven deaths from violence were registered. and 83, or nearly two-fifths, of the deaths occurred in public institutions. The causes of 11, or more than 5 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeon W. E. Bennett to the *Clyde*. Staff Surgeons P. W. Bassett-Smith and G. Welch to be Fleet Surgeons, with seniority of March 26th, promoted for conspicuous merit; J. H. Whelan to the *Edgar*, on commission, to date April 9th. Surgeons: E. A. Shaw, F. H. A. Clayton, F. J. A. Dalton, and E.

Sutton to be Staff Surgeons, with seniority of March 26th, promoted for conspicuous professional merit; R. W. B. Hall to the *Edgar* on commission.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel Rowney is placed under orders for service in India. Major E. C. Freeman has arrived at Portsmouth for duty. Colonel Rooney is placed on retired pay. Dated March 22nd, 1903. Lieutenant-Colonel Rennie retires on retired pay. Dated March 28th, 1903.

The transfer to temporary half-pay on account of ill-health of Major J. I. P. Doyle will take effect from Dec 1st, 1902.

The confirmation of the undermentioned Lieutenants in that rank, which was notified in the *London Gazette* of March 10th, 1903, is cancelled: W. F. Ellis and F. L. Henderson.

IMPERIAL YEOMANRY.

Suffolk (The Duke of York's Own Loyal Suffolk Hussars): Walter John Hervey to be Second Lieutenant. Dated March 28th, 1903. Surrey (the Princess of Wales's): Reginald Courtenay Gayer to be Surgeon-Lieutenant. Dated March 17th, 1903.

ROYAL ARMY MEDICAL CORPS (MILITIA).

Lieutenant-Colonel Sir J. R. A. Clark, Bart., C.B., is granted the honorary rank of Colonel. Dated March 5th, 1903.

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 2nd Glamorganshire: Lieutenant S. H. Hoyle to be Captain (dated March 28th, 1903); Surgeon-Lieutenant C. C. Parsons to be Surgeon-Captain (dated March 28th, 1903).

Rifle: 2nd Volunteer Battalion the York and Lancaster Regiment: Alfred Robinson to be Surgeon-Lieutenant. Dated March 28th, 1903.

THE KING'S BIRTHDAY.

Notice is given in the *London Gazette* that the King's Birthday will be celebrated in London and at all home stations on Friday, June 26th. At all foreign stations His Majesty's Birthday will be celebrated on Monday, Nov. 9th.

WAR OFFICE REGULATIONS ABOUT THE CHARACTER OF ARMY RECRUITS.

A War Office circular memorandum has been issued with the view of preventing the enlistment of undesirable characters into the regular army and militia. No man is to be accepted in future in any branch of these services who cannot produce a satisfactory reference as to his character and antecedents. If this is not forthcoming, steps are to be taken to obtain the man's character. The recruiting officer is to satisfy himself that the candidate is in every respect a suitable man for enlistment. In order that desirable men may not be lost to the army whilst inquiry is being made recruits may be attested but will not be finally approved until a satisfactory character is forthcoming.

Correspondence.

"Audi alteram partem."

THE RETARDED PULSE WAVE IN AORTIC REGURGITATION.

To the Editors of THE LANCET.

SIRS,—Dr. Paul M. Chapman in THE LANCET of March 28th, p. 869, quotes me as having said that "the pulse in aortic regurgitation is always retarded or delayed." I beg permission to complete the sentence—"that is, there is an appreciable interval between the beat of the heart, the carotid pulse, and the pulse in the radial artery, which varies according to the extent of the incompetence." The observation was not considered sufficiently important from a clinical point of view to demand full discussion, since the increased interval between the apex beat, the carotid throb, and the radial pulse is simply an incident of the condition of the arterial circulation which gives rise to the collapsing pulse, and while on this account it is interesting the pulse is more trustworthy as evidence of the degree of incompetence.

In examining the question of pulse delay, whether by clinical observation or by experiment, the first point to be made clear is that the case is one in which the regurgitation is considerable. There may be a loud diastolic murmur when the amount of blood re-entering the ventricle is inconsiderable, more particularly when the incompetence is a sequel of degeneration of the aorta with dilatation and rigidity of its walls. Here the absence of delay in the carotid and radial pulse is an item of evidence of the slight [illegible] ticity in the aorta. Or, [illegible] with the incompetence [illegible] pressure which gives rise [illegible] the retardation need not occur.

Since Dr. Chapman's patient was a young man the first of the conditions cannot be present, but a scientific question being at issue it would have been better to have given the evidence on which was based the statement that there was [illegible] idial [illegible] and [illegible] the murmur or murmurs, and the presence or absence of the aortic second sound. Even the pulse trace, which in aortic incompetence usually has great significance, in Fig. 2, so far as I can make it out, tells us nothing whatever as to the amount of regurgitation, and I should be disposed to interpret the cardiogram as indicating stenosis as well as incompetence. I should further infer the existence of stenosis from the statement that the heart muscle was largely hypertrophied, and especially from the fact that the duration of the systole was at its extreme maximum.

I try to keep my eyes open and my mind free from prepossession, but I have found no reason to doubt the accuracy of the observation that in real aortic incompetence there is delay in the carotid throb and radial pulse. Let anyone sit down before a case in which the physical signs of regurgitation enumerated above are well marked, with the tip of the finger of one hand on the apex beat, his eye on the carotid, and the fingers of the other hand on the radial pulse with the hand well raised, and, according to my experience, he will be able to count one, two, three, as one event follows the other. I have, indeed, found in aortic regurgitation with a failing heart and demonstrated to a class of students an intermission of the apex beat synchronous with the beat of the pulse belonging to the preceding systole, while the pulse was absent at the instant when the next heart beat was felt.

I am, Sirs, yours faithfully,

March 30th, 1903. W. H. BROADBENT.

ANGINA PECTORIS.

To the Editors of THE LANCET.

SIRS,—In his ingenious paper on angina pectoris in THE LANCET of March 21st, p. 793, Dr. E. H Colbeck ascribes the pain experienced in the anginal paroxysm to localised [illegible] tricular wall. The chi [illegible] the pain in angina [illegible] a paper on cardiac pain and angina pectoris in the *Practitioner* for October, 1891, vol. xlvii., p. 241, is that he postulates a patchy degeneration of the ventricular wall while I assume that the symptom may be caused by weakness of the ventricular wall such as may be due to fatty degeneration either general or partial. In that paper I point out that there are probably several varieties of cardiac pain. It is not to be wondered at, however, that opinions differ very greatly in regard to their causation, because when a medical man is called in to such cases his whole attention is usually taken up by his efforts to help the patient and he has great difficulty in making accurate observations on the causation of the symptoms It is only when one has a case of frequently recurring angina under close observation, as I had in 1867, that one is able to note what changes occur in the circulation during the attack. I saw the patient almost every night for several months together and was able to notice the high blood pressure during the attack and its fall as the attack passed off. But in such favourable circumstances I was only once able to make an observation, and that an imperfect one, during its onset.

The sphygmographic tracings which I obtained showed most clearly that during an attack the pulse became small, rapid, and tense, exactly like what one would expect from a heart too weak to empty itself against the resistance of high arterial pressure. If I understand him aright says in his paper that distension of the heart and stretching of the nerve elements in the cardiac wall cannot coexist with an increased arterial pressure, but I cannot see on what grounds this statement is made. In my paper on cardiac pain and angina pectoris I have compared the pain in the heart during angina to that which occurs in the bladder or colon when these are distended and trying in vain to empty themselves. And here I may note that a sharp distinction must be made between distension and dilatation, for in all these cases it is possible for the organ to remain of its normal size or be even smaller than normal, yet be extremely distended and both its contents and its muscular walls be under great pressure because these walls are contracting firmly on the contents of the viscus. On the other hand, all three organs may be dilated much above their normal size and may not be distended at all. As I have pointed out in the paper to which I have already referred the condition which causes intense pain in the colon and bladder is an attempt of the muscular walls to expel their contents against a resistance which they are unable to overcome. Judging by analogy I consider the cardiac pain in one form at least of angina pectoris to be due to the ineffectual attempts of the heart to empty itself in face of increased arterial pressure, though how far the pain is due to distension and how far to irritation of the sensory nerves in the heart by violent contraction of its muscular fibres I cannot say. Pain will occur in the colon and bladder without any patchy degeneration of their walls. Patchy degeneration of the heart will undoubtedly enfeeble it, will give rise to inability to empty itself in face of increased arterial pressure, and may thus produce the symptoms of angina pectoris. But unless it can be shown that angina occurs only when the heart has undergone patchy degeneration and does not occur when degeneration occurs evenly over the whole ventricle, Dr. Colbeck's hypothesis, ingenious as it is, cannot be regarded as proved. In favour of the correctness of my own opinion I may adduce the fact that it led me to employ an entirely new method of treatment—namely, the lowering of arterial pressure by the administration of nitrite of amyl. I first described this method in THE LANCET of July 27th, 1867, p. 97, and the success of my plan of lowering the blood pressure either by this drug or by others which have a similar action has been conclusively proved by an experience of more than 35 years. I am, Sirs, yours faithfully,

March 25th. LAUDER BRUNTON.

THE QUARANTINE STATION AT MARSEILLES.

To the Editors of THE LANCET.

SIRS,—As one of the passengers who landed at the island of Frioul from the *Oroya* on Jan. 10th last I would like to add a few words to those of your Paris correspondent in THE LANCET of March 21st, p. 844. I preface my remarks, and I am sure all the others who were present would do the same, with an expression of profound sympathy with M. Tessier and his family in the loss which they have sustained. The death of the young man is undoubtedly due to the detention, under misrepresentation, at the lazaretto.

In addition to the defects which your correspondent notes and to the discomfort arising from the eternal mistral I particularly mention the sanitary arrangements: so disgusting were they that being a member of a profession which concerns itself with these matters, and finding no attendance, I frequently during the five days, myself, did housemaid's duty. One is bound to say that the food was good, but the place in which it was prepared was very dirty and was the common room of many undesirable persons. Of the minor discomforts and the want of the small necessities of life I do not speak; they were many and irritating, especially to the seven ladies concerned. I am sure that all present at Frioul, French, Hungarian, and English, agree with your correspondent that the quarantine station at Marseilles is a disgrace to France.—I am, Sirs, yours faithfully,

THEO. MOORE, A.R.I.B.A.

Caroline place, Mecklenburgh-square, W.C.,
March 30th, 1903.

THE TEETH OF THE PITCAIRN ISLANDERS.

To the Editors of THE LANCET.

SIRS,—In November, 1901, the daily and medical papers made comments on an interesting minute (February, 1899, and August, 1901) published by the Admiralty concerning the Pitcairn islanders. My attention was directed more especially to the details mentioned concerning the state of decay of the upper front teeth (permanent) so noticeable in many of the islanders. I wrote to the Lords of the Admiralty asking whether they would allow a series of questions concerning this feature of the teeth to be given to the medical officer of the first man-of-war which might visit Pitcairn Island. Their lordships at once agreed to this. Mr. C. S. Tomes very kindly revised a list of questions which I drew out and we then submitted the following questions (see inclosure No. 1) to be given to the medical officer of His Majesty's ship that might visit the island. The original papers were given to H.M.S. *Condor*, which vessel unfortunately was lost. Thanks to the care of the Admiralty a further copy of our questions was sent out and the following interesting communication (see inclosures Nos. 2 and 3) has been received which may be of interest to your readers.

I am, Sirs, yours faithfully.
J. KINGSTON BARTON, M.R.C.P. Lond.

London, March 29th, 1903.

[INCLOSURE NO. 1.]

QUESTIONS.

The loss of front teeth has been noted by two independent observers and among other speculative causes it has been attributed to degeneracy due to in-and-in-breeding but inadequate information is given whereon to form any opinion.

General.

1.—What proportion of the population are affected in this way?

2.—Is there any difference in the sexes in this respect?

3.—Are the back teeth also bad in the persons thus affected, or has some cause acted on the front teeth alone?

4.—Would you say that the teeth had decayed and broken off, or are they worn away?

Family.

5.—Do the families affected differ in general physique from those which are not?

6.—Are these families of European type as regards hair, features, &c., or do they show indications of admixture with Polynesian blood?

Specific.

7.—Can you learn of any habits—such as, for example, betel-nut chewing—which might influence the teeth?

8.—Or do they make any unusual use of their teeth in any of their handicrafts?

9.—Ask, in cases where the teeth are much decayed, if as an infant the child was breast fed for the usual period (six to nine months). If not, what food was given?

10.—Have you observed Hutchinson's teeth or any other marks of inherited syphilis among them?

11.—Would you say that the mental dulness noted as somewhat characteristic of the population is especially conspicuous in the persons having bad teeth?

(Signed) C. S. TOMES.
Nov. 20th, 1901. (Signed) J. KINGSTON BARTON.

[INCLOSURE NO. 2.]

To Commander C. H. Umfreville, H.M.S. *Shearwater*, Pacific Station.

H.M. Ship *Shearwater*, at sea, 17th January, 1903.

SIR,—On landing at Pitcairn Island with you on 10th January, 1903, I proceeded in pursuance of orders received to inquire into the alleged loss of the front teeth of the upper jaw amongst the inhabitants of this island. On the way from the landing place to the settlement and going through the settlement I met many of the inhabitants and was very much struck by the fact that many of them were minus the front teeth of the upper jaw.

I carried out my inquiries concerning this peculiar phenomenon on the lines suggested by Mr. Tomes and Mr. J. Kingston Barton in their letter to the Secretary of the Admiralty of 20th November, 1901. The total population of the island is 153. This number is thus made up—males 74, of whom 27 are married; females, 79. Mr. Christian very kindly collected together a number of the inhabitants for me to examine. There were present 36 in all. These 36 were a very representative gathering, as there were 14 adult males, 10 adult females, seven male children, and five female children present.

Out of this number, six men, three wome
three female children showed the remarkabl
these figures one may say that 50 per cent
and that there is practically no difference
cases, and especially in the younger people,
—i.e., the back teeth of the upper jaw and all the teeth of the lower jaw—were quite sound, in fact remarkably good. Most of the islanders had excellent teeth, barring the deficiency of the front in some cases.

The incisors are apparently the only teeth affected in this peculiar manner—at all events, that was the case in the people I saw and Mr. McCoy's testimony bears me out in this statement. These teeth break off owing to caries which sets in in childhood. Mr. McCoy informed me that this decay commences soon after the permanent teeth are established and usually first attacks one of the middle incisors. One of the children I saw was thus affected. The other incisors soon become carious and break off close to the gums. As a rule Mr. McCoy extracts the stumps. Apparently if the teeth in childhood escape the peculiar form of caries they are not thus attacked in later life. Mr. McCoy also informed me that this dental trouble made its appearance for the first time amongst the fourth generation of islanders and certainly three old men whom I saw of the third generation did not present this phenomenon. He says the children are more troubled in this way now than they were some 30 or 40 years ago.

The children of Mr. Coffin, who has been 22 years on the island, are not affected, whereas the children of Mr. Warren who settled on Pitcairn Island in 1864 were affected. Both Mr. Coffin and Mr. Warren married Pitcairn women. The families whose children are affected differ in no way, physique or otherwise, from the remainder of the [illegible] ve some members [illegible] ve the Polynesian types are equally [illegible]

[illegible] uestions asked by Mr. [illegible]

[illegible] Scribner, Surgeon.

[INCLOSURE NO. 3.]

ANSWERS TO QUESTIONS IN ADMIRALTY LETTER OF 20TH NOVEMBER, 1901.

General.

1.—50 per cent.
2.—No.
3.—Some cause has acted on front teeth alone.
4.—Decayed and broken off; never worn away.

Family.

5.—Affected families differ in no way from remainder of population.
6.—No. Distinctly Polynesian.

Specific.

7.—No.
8.—No.
9.—Breast fed.
10.—No.
11.—No.

(Signed) R. B. SCRIBNER, Surgeon, R.N.

THE MAKING OF POST-MORTEM EXAMINATIONS BY GENERAL PRACTITIONERS.

To the Editors of THE LANCET.

SIRS,—I feel sure that many medical men will fully agree with Dr. H. H. Littlejohn's remarks on the above subject published in THE LANCET of March 28th, p. 862. The mere fact that it is possible to obtain diplomas in medicine and surgery without having even been present at a post-mortem examination is sufficient to throw a doubt on the reliability of such examinations when made without skilled assistance. In addition to this I consider that it is work from which a general practitioner would be much better relieved seeing that he may have to go straight from a post-mortem examination to a confinement, or a compound fracture.

I am, Sirs, yours faithfully,
EDWARD H. SWEET, B.A. Oxon., M.R.C.S. Eng., L.R.C.P. Lond.
Uckfield, March 30th, 1903.

THEORIES OF IMMUNITY.

To the Editors of THE LANCET.

SIRS,—It seems to me that purely imaginary theories like that of Ehrlich are of use only if they simplify the facts which have been ascertained. The subject of immunity is one of the utmost importance and we are already in possession of many important facts in regard to it. If, therefore, Ehrlich's theory systematised these so as to give some insight into the guiding principles, so as to make the connexion between the different facts evident, so as to guide to the discovery of new facts, we might excuse its tangles of fantastic figures and erudite equations. But does it do any of these things? Dr. A. S. F. Grünbaum's explanations of Ehrlich's theories occupy your columns to-day. He tells us that a toxin molecule contains H + T + X. I can quite believe it. My acquaintance with organic chemistry would have led me to expect much more of it. But what is the use of all these cytophiles and haptophores? I may be stupid, but I cannot see it. The explanatory figures might, indeed, suggest new ideas to the designers of new carpets or wall-papers, but they do not to my mind convey a particle of useful information to a medical practitioner who wants to know enough of the processes of disease to be able to combat them.

I am, Sirs, yours faithfully,
Welbeck-street, W., March 27th, 1903. HUGH WOODS.

A DISCLAIMER AND A WARNING.

To the Editors of THE LANCET.

SIRS,—I am informed that a man of the name of "Dr. East" (or some similarly sounding name) is calling on medical men in Brighton describing himself as "Dr. Crocker's assistant" and trying to sell copies of my Atlas of Diseases of the Skin. I write to say that I know nothing of this person who is making this unauthorised use of my name and, except at the hospital, have no assistant. I may add that the Atlas is the property of the publisher and my only interest is a small royalty on each copy sold.

I am, Sirs, yours faithfully,
Harley-street, W., March 30th, 1903. H. RADCLIFFE CROCKER.

P.S.—I have since been informed that the man's name is Heath.

THE RYE AND WOOLWICH ELECTIONS.

To the Editors of THE LANCET.

SIRS,—I am obliged to you for permitting me to rectify a mistake which some of the daily papers fell into in reporting what I said about these elections at our recent conference. In referring to them I mentioned that the anti-vaccinists in both constituencies had assisted the winning members: in the case of Mr. Will Crooks because he was an anti-vaccinist and in the case of Dr. Hutchinson because he was an anti-compulsionist. As we are fighting against compulsion we can conscientiously vote for a candidate who is opposed to the present law, which inflicts fines of 20*s.* and costs for the misdemeanour of taking the advice of a qualified medical man if he advises that a child should not be vaccinated.

I am, Sirs, yours faithfully,
Edgbaston, March 31st, 1903. A. PHELPS.

⁂ The *Times* and other responsible journals reported General Phelps as claiming Dr. Hutchinson as an opponent to vaccination. General Phelps should have written to these newspapers to rectify the widespread mis-statement without waiting until his attention was called to it by us.—ED. L.

WANTED—A NEW ORDER OF NURSES.

To the Editors of THE LANCET.

SIRS,—A question which has often suggested itself to me and to others is this. At present there are, I suppose, but three kinds of nurses available in a case of sudden illness—viz., (1) the institution nurse at £2 2*s.* a week; (2) the ordinary occasional private nurse, generally a comparative amateur; and (3) the infirmary visiting nurse. But it is apparent that these three alternatives cover only half the ground. In suburban London alone there must be thousands—scores of thousands—of households where the needs are not answered by any one of the three. I mean especially the households where no servant is kept—a kind of household getting very rapidly more numerous as servants get scarcer and the already appalling bill for rent and rates gets larger. In [illegible] supplied on the understanding that she receives domestic attendance and does nothing but nurse the patient. The attendance would not be forthcoming and hence, as I say, she would not go. There remains only the private nurse. Some of these are most excellent people, but when driven into a [illegible] emergency the medical man no less than the [illegible] of a private nurse [illegible] owing prejudice in favour of more science than these nurses ordinarily possess. What I submit to be necessary and urgent is this, some institution on a large scale whence, at any time of day or night, could be got for a guinea a week a nurse who would undertake not only the bare attendance on the patient, but such additional work as the preparation of her own and the patient's food, leaving any rough work to, let us say, a charwoman. Surely there must be plenty of women skilled in nursing who would not despise an opportunity of this kind? It would be infinitely better, too, for a medical man to find a practical scientific nurse at a bedside to whom he could give his directions rather than some unskilled amateur. As to the need, it is simply a crying one. It must be borne in mind that the neighbourliness which is assumed in cases of illness and which does undoubtedly tend to solve such questions in the country is not to be relied upon in London. Every day one meets somebody who tells you that he and his wife have lived in the same suburb for so many years and "don't know their next-door neighbours," or half a dozen people in the close vicinity. Therefore I venture to ask your help.

I am, Sirs, yours faithfully,

March 3rd, 1903. R. A. R.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

More Plague Superstitions.—Improvements in Calcutta: a Serious Omission.—The Plague Epidemic: a Record in Mortality.—The St. John Ambulance Centre at Bombay.—Further Donation by Mr. Henry Phipps.—Indian Nursing Service.

EXTRAORDINARY evidence of the superstition which exists among the lower classes of the population has come to light in one of the suburbs of Bombay city where plague is raging. A woman caused a report to be made that she was possessed of a goddess and could cure plague, and having gathered a large crowd gave out that by sacrificing four sheep, two rams, and other things plague would be stopped. She also tried to do miracles, but the most ghastly proceeding was reached when she began sucking a bubo. Other cases were treated in a similar manner, by sucking or biting the bubo, applying a red powder, and pressing betel nut on the bubo with her toe. She then beat her patients with a green staff to drive out the plague, each operation lasting about 20 minutes. A considerable number of patients were treated in this manner, but the point of the story lies in the sympathy of the people and their obeisances to the woman along the public road and in the police-court. She was charged with causing a public nuisance.

The Budget estimates of the Calcutta corporation have been prepared with the object of effecting many important improvements during the ensuing year. 19 lakhs are to be spent on the suburban drainage, 13 lakhs on the continuous water-supply scheme, and no less than 70 lakhs on various public works. There are to be great extensions of roads and widening of many important thoroughfares and opening out of congested areas. Markets, slaughter-houses, and incinerators are all to be extended. In addition to the above, the great scheme for the improvement of Calcutta under a separate trust is to be taken in hand the details of which will be announced by Government shortly. Certain parts of the city of Calcutta are as bad as, if not worse than, any town in India and very widespread improvements will have to be effected to alter its insanitary condition. Perhaps the greatest fault is in the latrine accommodation for the great mass of the people, more especially in the bustees. The filthy state of the privies is general, partly because the hand removal of the excreta is very imperfect, but it is partly also due to dirty habits, to faulty construction, and to deficiency of drainage. I regret to see that nothing is reported as having been arranged to meet this most crying evil.

During the past fortnight there has occurred a record in plague mortality throughout India. Last week 28,860 deaths were reported and during the week before 27,319 deaths. The highest previous record was 26,108 in March last year. The mortality now is at the rate of over a million annually. Bombay Presidency returns 10,444 deaths, the Punjab 5642, Bengal 3436, United Provinces 3204, Central Provinces 1852, Madras Presidency 643, Mysore State 423, Hyderabad State 861, and Berar 658. Bombay city reports 1182 deaths and Calcutta 468. The epidemic is spreading in the Punjab, in Bengal, in the United Provinces, in the Central Provinces, and in Madras. The outbreaks in both Bombay city and Calcutta are developing with great intensity. In Bombay the rate of general mortality has risen to 124 per 1000 per annum. It is understood that the transfer of all plague preventive measures to the ordinary health department which is contemplated in Calcutta from July 1st next is part of a general scheme which is to be widely applied throughout India. Plague is no longer to be put on any different footing from other epidemic diseases. Such establishment as is considered necessary will be placed under the direction of the sanitary authorities.

The presentation of certificates of the St. John Ambulance Association at Bombay by H.R.H. the Duke of Connaught afforded the supporters of this movement an opportunity to announce the work which has been done on this side of India. 420 men and 158 women have earned certificates. The instruction in first-aid has been given to railway servants, soldiers, and police, both native and European. The Bombay centre has been very active and the Duke of Connaught had good reason to congratulate the staff upon the excellent work which they had accomplished. Several instances have already occurred where the instruction given has resulted in practical benefit.

It is said that Mr. Henry Phipps is so pleased with the purposes to which the Viceroy decided to devote the donation of £20,000 which he gave for the benefit of the people of India and which the Viceroy divided between a central agricultural laboratory and a Pasteur institute for southern India that he has increased his gift by another £10,000. The Government of India hopes to be able to carry out measures for combining agricultural education, scientific research, and practical experiment in one locality.

I understand that the proposed amalgamation of the Indian nursing service with the sister service at home has been abandoned. The Indian service will be strengthened during the next year by three senior nursing sisters and 13 nursing sisters.

March 6th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The General Hospital.

THIS being the season of the year at which the annual reports of the various hospitals are made public one learns the financial and general position of these institutions for the past twelve months and their needs and aspirations for the future. The General Hospital has done more work than ever during the past year, having admitted 5642 in-patients, the largest number as yet reached and 472 more than in the previous year. The cost of maintaining the hospital is great, though the expenses per head are cut down to the lowest possible figure. The chairman of the medical committee, Dr. R. M. Simon, showed that the cost per head of the in-patients was £3 5*s.* 6*d.*, as compared with £10 5*s.* at St. Bartholomew's Hospital, £7 10*s.* at St. Thomas's Hospital, £4 at the Liverpool Royal Infirmary, and the same amount at the Queen's Hospital, Birmingham. At the meeting of the subscribers to the Queen's Hospital—held shortly after that at the General Hospital, by the way—it was shown that during the past year this figure had been reduced to £3 12*s* 1*d.*, so that there is not much difference between the cost of the two institutions, both of which may be considered as being run upon the most economical lines compatible with satisfactory management. The slight excess of the Queen's Hospital over the General Hospital may easily be accounted for by the fact that the cost per head is necessarily greater in running a small than a large institution. It is not wonderful, with the increased work now being accomplished by the General Hospital, that an appeal for further funds is necessary. This institution has an annual subscription list of £7750, in addition to income from investments amounting to £6000 per annum. The subscriptions of the working men's agencies produce £3100 per annum and the average income yearly from the Hospital Sunday Fund and musical festival amounts to about £3000. The necessary annual expenditure is £25,000, so that the committee is faced with the problem of raising a sum of £5150 every year in addition to the moneys alluded to above. An important addition to the resources of the hospital will be added shortly in the shape of a laundry which is to be built and equipped at the sole expense of Sir John Holder who has for a number of years been one of the most generous friends of the institution. The most important change in the staff has been the retirement of Dr. E. Malins from the post of obstetric officer, which he has held for 25 years. He has been appointed honorary consulting obstetric officer and the vacancy caused by his retirement has been filled by the election of Dr. Thomas Wilson who has been for several years assistant in this department. For Dr. Wilson's post there are several candidates. Dr. Wilson on being appointed to this position at once resigned his post of physician to the City Hospital. There are a number of candidates for this post which should have been filled up by this time but for a slight hitch which has arisen in the proceedings. At the last meeting of the board of guardians the infirmary committee sent forward two names out of the candidates who had offered themselves for the position. For some reason this procedure did not commend itself to the board which has postponed its decision until its next meeting with a view of considering the claims of all the candidates and not merely of those recommended to it by its committee.

The Queen's Hospital.

This charity has also recently presented its report and held its annual meeting. The number of in-patients received during the year was 2365 and that of out-patients was 28,974. There was a deficit of £800 on the income and expenditure account so that further funds are here also required. During the year Mr. J. T. J. Morrison, who has been assistant surgeon for a number of years, has succeeded to the position on the full staff rendered vacant by the resignation of Mr. Frank Marsh who has been appointed a consulting surgeon. Mr. Marsh has also resigned his post as surgeon to the Ear and Throat Hospital where he has been succeeded by Dr. W. Lamb. Quite a number of junior staff appointments have been filled up, Mr. W. Billington and Mr. A. W. Nuthall having become casualty surgeons, Dr. J. G. Emanuel casualty physician, and Dr. A. S. Barnes, who has for some time occupied a resident post at the National Hospital for the Paralysed and Epileptic, Queen Square, London, pathologist. All these gentlemen were students of the local school of medicine, which may be congratulated upon having supplied this hospital with four staff officers in one year. In respect to the last appointment it may be mentioned that the wish was expressed at the annual meeting that a more adequately equipped pathological department might shortly be added to the hospital. That which it at present possesses is scarcely satisfactory and certainly falls behind the very complete provision made for this subject at the sister hospital.

The Lying-in Charity.

This body has held its annual meeting at which it was obvious that the important changes in connexion with this branch of medical work which the Midwives Act will bring about have not escaped the notice of the committee. A number of years ago there was a lying-in hospital in the city, which, by the way, was not then a city. It did not work well, or at least it was thought that its success was not sufficient to warrant its continuance and it was closed. Its museum, which contained some valuable specimens, was handed over to the medical school and now forms part of the collection in the medical department of the University. From that date the work of the charity has been purely of an out-patient character, hardly a satisfactory arrangement for so large a centre of population. The Lying-in Charity covers most of the gratuitous work of this kind in the city, for the General Hospital does not touch these cases and the Queen's Hospital has only an out-patient department for the purpose. In this last-mentioned department most of the medical students receive their training. The proposal now made by the committee of the Lying-in Charity is that a home should be erected in a central part of the city in which the secretarial and administrative work of the charity may be carried on and where also a few beds may be provided for the reception of cases requiring special treatment. It is obvious that such an institution would be very valuable, not merely to the poor, but also for the training of midwives and probably of medical students, and it is to be hoped that funds will be forthcoming for the purpose. The committee also desires to extend its present boundaries so as to make them commensurate with the enlarged boundaries of the city and to do this it must add two further districts which will involve an expenditure of £8000.

Other Hospitals.

The demands upon the generosity of the public are not exhausted by the three institutions already alluded to. The Women's Hospital requires enlargement and the Dental Hospital is crying out for a new building. For some reason this valuable institution has not received the measure of public support which it certainly deserves and so far the promises of money have not been such as to warrant the committee of the hospital in proceeding with its scheme. The amount of relief given to suffering humanity within the walls of the present building is very great and its value as the place of training of the future dental surgeons of the district is not to be underrated, so that it is much to be hoped that the very modest amount of money now asked for will soon be forthcoming in order that the new hospital may be erected.

The Education Committee.

The names of the persons who are to constitute the first education committee under the new Act have just been approved by the city council. Amongst them is the name of Mrs Ellen F. Pinsent, a paper by whom was recently published in THE LANCET on the feeble-minded children question. This lady has been a member of a hybrid committee of the late school board which deals with these cases and with those of the blind and the deaf. She has taken an extraordinary interest in the work and has devoted an immense amount of time to what is a thankless and depressing task, so that her services will be of great value to the new authority. One of the last acts of the school board was to advertise for a superintendent of the feeble-minded classes who was to be either a qualified medical woman or a woman with special knowledge of the subject. It is understood that a well-qualified medical woman is applying and it is much to be hoped that she or some similar person will be appointed, as there is no doubt that a medical training will greatly assist the occupant of the post in carrying out its duties. Such a person might also contribute to the solution of the difficult question of the best method of treatment of these cases, for it must be confessed that at present it seems as if a great deal of public money was being expended over them without any adequate return. Amongst the other names on the authority is that of one medical man, Professor B. C. A. Windle, F.R.S., Dean of the Medical Faculty in the University. He was a member of the school board for three years though he had not sought a seat upon the board which has just gone out of office.

The University of Birmingham.

A much needed addition to the medical school has been made in the shape of a large, well-lighted histology room, the old room used for this purpose being now employed for the [illegible] of experimental physiology. The new room is fitted up on [illegible] a bench supplied [illegible] office of Professor Priestley Smith, who has represented the Medical Faculty on the council of the University for the past three years, having expired, Professor H. G. Barling has been elected by his colleagues to occupy that position.—Sir Victor Horsley has consented to deliver the address at the opening of the winter session of the Medical Faculty which will take place this year on Monday, Oct. 5th.

March 31st.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Ladies' Charity and Lying-in Hospital and the Stanley Hospital.

THE annual meeting of the subscribers to the Ladies' Charity was held on March 17th, the Lord Mayor presiding. During the year 1636 patients were attended to in the outdoor department compared with 1554 in the previous year. 281 patients were admitted during the year. In connexion with the school of midwifery 43 pupil midwives were trained during the year; 37 of these entered for examination, of whom 26 received certificates of having satisfied the examiners. 32 medical students took their midwifery training with the charity during the year in accordance with arrangements made with University College to provide for this branch of the medical curriculum. £403 were received from the Hospital Saturday and Sunday Fund. There was a deficiency of over £400 in the ordinary income. The hospital was founded in 1796 and has carried on a valuable work among the poor of the city and it deserves stronger support.—A new operating theatre has become an absolute necessity at the Stanley Hospital and the committee has expressed its intention of appealing for funds to reconstruct and to furnish the operating theatre in accordance with modern ideas.

University College, Liverpool.

The council of University College has appointed Mr. D. Douglas Crawford, honorary surgeon to the Stanley Hospital, to a lectureship in surgical and applied anatomy. Mr. Douglas-Crawford received his medical education in in cases of illness and which does undoubtedly tend to solve such questions in the country is not to be relied upon in London. Every day one meets somebody who tells you that he and his wife have lived in the same suburb for so many years and "don't know their next-door neighbours," or half a dozen people in the close vicinity. Therefore I venture to ask your help. I am, Sirs, yours faithfully,

March 3rd, 1903 R. A. R.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

More Plague Superstitions.—Improvements in Calcutta: a Serious Omission.—The Plague Epidemic: a Record in Mortality.—The St. John Ambulance Centre at Bombay.—Further Donation by Mr. Henry Phipps.—Indian Nursing Service.

EXTRAORDINARY evidence of the superstition which exists among the lower classes of the population has come to light in one of the suburbs of Bombay city where plague is raging. A woman caused a report to be made that she was possessed of a goddess and could cure plague, and having gathered a large crowd gave out that by sacrificing four sheep, two rams, and other things plague would be stopped. She also tried to do miracles, but the most ghastly proceeding was reached when she began sucking a bubo. Other cases were treated in a similar manner, by sucking or biting the bubo, applying a red powder, and pressing betel nut on the bubo with her toe. She then beat her patients with a green staff to drive out the plague, each operation lasting about 20 minutes. A considerable number of patients were treated in this manner, but the point of the story lies in the sympathy of the people and their obeisances to the woman along the public road and in the police-court. She was charged with causing a public nuisance.

The Budget estimates of the Calcutta corporation have been prepared with the object of effecting many important improvements during the ensuing year. 19 lakhs are to be spent on the suburban drainage, 13 lakhs on the continuous water-supply scheme, and no less than 70 lakhs on various public works. There are to be great extensions of roads and widening of many important thoroughfares and opening out of congested areas. Markets, slaughter-houses, and incinerators are all to be extended. In addition to the above, the great scheme for the improvement of Calcutta under a separate trust is to be taken in hand the details of which will be announced by Government shortly. Certain parts of the city of Calcutta are as bad as, if not worse than, any town in India and very widespread improvements will have to be effected to alter its insanitary condition. Perhaps the greatest fault is in the latrine accommodation for the great mass of the people, more especially in the bustees. The filthy state of the privies is general, partly because the hand removal of the excreta is very imperfect, but it is partly also due to dirty habits, to faulty construction, and to deficiency of drainage. I regret to see that nothing is reported as having been arranged to meet this most crying evil.

During the past fortnight there has occurred a record in plague mortality throughout India. Last week 28,860 deaths were reported and during the week before 27,319 deaths. The highest previous record was 26,108 in March last year. The mortality now is at the rate of over a million annually. Bombay Presidency returns 10,444 deaths, the Punjab 5642, Bengal 3436, United Provinces 3204, Central Provinces 1852, Madras Presidency 643, Mysore State 423, Hyderabad State 861, and Berar 658. Bombay city reports 1182 deaths and Calcutta 468. The epidemic is spreading in the Punjab, in Bengal, in the United Provinces, in the Central Provinces, and in Madras. The outbreaks in both Bombay city and Calcutta are developing with great intensity. In Bombay the rate of general mortality has risen to 124 per 1000 per annum. It is understood that the transfer of all plague preventive measures to the ordinary health department which is contemplated in Calcutta from July 1st next is part of a general scheme which is to be widely applied throughout India. Plague is no longer to be put on any different footing from other epidemic diseases. Such establishment as is considered necessary will be placed under the direction of the sanitary authorities.

The presentation of certificates of the St. John Ambulance Association at Bombay by H.R.H. the Duke of Connaught afforded the supporters of this movement an opportunity to announce the work which has been done on this side of India. 420 men and 158 women have earned certificates. The instruction in first-aid has been given to railway servants, soldiers, and police, both native and European. The Bombay centre has been very active and the Duke of Connaught had good reason to congratulate the staff upon the excellent work which they had accomplished. Several instances have already occurred where the instruction given has resulted in practical benefit.

It is said that Mr. Henry Phipps is so pleased with the purposes to which the Viceroy decided to devote the donation of £20,000 which he gave for the benefit of the people of India and which the Viceroy divided between a central agricultural laboratory and a Pasteur institute for southern India that he has increased his gift by another £10,000. The Government of India hopes to be able to carry out measures for combining agricultural education, scientific research, and practical experiment in one locality.

I understand that the proposed amalgamation of the Indian nursing service with the sister service at home has been abandoned. The Indian service will be strengthened during the next year by three senior nursing sisters and 13 nursing sisters.

March 6th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The General Hospital.

THIS being the season of the year at which the annual reports of the various hospitals are made public one learns the financial and general position of these institutions for the past twelve months and their needs and aspirations for the future. The General Hospital has done more work than ever during the past year, having admitted 5642 in-patients, the largest number as yet reached and 472 more than in the previous year. The cost of maintaining the hospital is great, though the expenses per head are cut down to the lowest possible figure. The chairman of the medical committee, Dr. R. M. Simon, showed that the cost per head of the in-patients was £3 5*s.* 6*d.*, as compared with £10 5*s.* at St. Bartholomew's Hospital, £7 10*s.* at St. Thomas's Hospital, £4 at the Liverpool Royal Infirmary, and the same amount at the Queen's Hospital, Birmingham. At the meeting of the subscribers to the Queen's Hospital—held shortly after that at the General Hospital, by the way—it was shown that during the past year this figure had been reduced to £3 12*s* 1*d.*, so that there is not much difference between the cost of the two institutions, both of which may be considered as being run upon the most economical lines compatible with satisfactory management. The slight excess of the Queen's Hospital over the General Hospital may easily be accounted for by the fact that the cost per head is necessarily greater in running a small than a large institution. It is not wonderful, with the increased work now being accomplished by the General Hospital, that an appeal for further funds is necessary. This institution has an annual subscription list of £7750, in addition to income from investments amounting to £6000 per annum. The subscriptions of the working men's agencies produce £3100 per annum and the average income yearly from the Hospital Sunday Fund and musical festival amounts to about £3000. The necessary annual expenditure is £25,000, so that the committee is faced with the problem of raising a sum of £5150 every year in addition to the moneys alluded to above. An important addition to the resources of the hospital will be added shortly in the shape of a laundry which is to be built and equipped at the sole expense of Sir John Holder who has for a number of years been one of the most generous friends of the institution. The most important change in the staff has been the retirement of Dr. E. Malins from the post of obstetric officer, which he has held for 25 years. He has been appointed honorary consulting obstetric officer and the vacancy caused by his retirement has been filled by the election of Dr. Thomas Wilson who has been for several years assistant in this department. For Dr. Wilson's post there are several candidates. Dr. Wilson on being appointed to this position at once resigned his post of physician to the City Hospital. There are a number of candidates for this post which should have been filled up by this time but for a

Edinburgh, London, and Berlin and has held the post of demonstrator of anatomy at University College for several years. The new appointment has been received with much satisfaction by the students of the college, with whom Mr. Douglas-Crawford is deservedly popular.

Liverpool School of Tropical Medicine.

The Senegambia expedition of the Liverpool School of Tropical Medicine, which reached the Gambia in September, 1902, left for Senegal early in March. Dr. J. E Dutton and Dr. J. Todd have been recently making investigations into the cause of sleeping sickness at M'Carthy's Island which lies about 150 miles up the river Gambia. Bites of flies on this river are said to have caused sleeping sickness in a white man who recently died at the Liverpool School of Tropical Medicine.

The Small-pox Epidemic in Liverpool.

For the week ending March 26th 86 cases of small-pox were reported to the medical officer of health, as against 84 in the previous week. Six deaths occurred during the week. There were 321 cases in hospital, compared with 335 in the previous week.

Is a Nursing Home a Nuisance in a Residential District?

In the Lancashire Chancery Court, before Vice-Chancellor Hall, an application was made at the instance of residents in the neighbourhood for an injunction in regard to the nursing home at the corner of Ullet-road and the court was asked to decide whether a nursing home was a nuisance to a fashionable residential neighbourhood. On behalf of the defendant counsel quoted from the restrictive covenants, which said that no "art, trade, or business that could be deemed or considered a nuisance to the neighbourhood" could be carried on. That showed, he contended, that a trade or business that could not be deemed a nuisance could be carried on. He further argued that no evidence of nuisance or annoyance had been submitted. The main objection was alleged depreciation of property owing to the presence of the nursing home in the neighbourhood, but there was nothing tangible from past experience or from fears of the future to suggest that any reasonable man would be disturbed in the enjoyment of his property. He would ask the Vice-Chancellor to hold that there was no risk of infection greater than in an ordinary dwelling; in fact, the risk would be less because of the precaution taken to prevent infection. The Vice-Chancellor, in giving judgment, said that the stipulation in the covenants that nothing should be carried on that could be considered a nuisance, as alleged by the plaintiffs, implied that there might be carried on an "art, trade, or business," which could not be considered a nuisance to the neighbourhood. It seemed to him that up to the present time there had been nothing that could be considered a nuisance to the neighbourhood. No complaint had been made as to the sanitary arrangements or appliances of the home and, in his own interests, Dr. A. Stookes, the director of the home, would do all he could to guard against infection. He did not think the question which he had to try was that of the possible depreciation of the adjoining property, for anyone was entitled to use his property in an ordinary way unless he was restricted by some covenant. There was no evidence adduced of actual depreciation and he thought that the question of infection had broken down. It was obvious there was nothing like a legal nuisance. A number of people in the neighbourhood said that they were annoyed, but he was satisfied that, to any reasonable person who looked at the matter without prejudice, there was no solid ground for annoyance beyond the mere sentimental objection to such an institution being there at all. He considered that the action had failed on every ground and it would be dismissed with costs.

At the Liverpool Medical Club recently a discussion ended in the following resolution:—

> That all public hospitals ought to be taken over and managed by the State, that the expenses should be borne entirely by the State, and that the medical staff should be paid as State officers.

March 31st.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Cardiff Port Sanitary Authority.

THE importance of Cardiff as a port is incidentally indicated in the annual report of Dr. Edward Walford, medical officer of health to the port sanitary authority. In 1902 there entered the port 12,100 vessels having an aggregate tonnage of nearly 6,000,000. The six sanitary inspectors examined during the year 8179 vessels and found 1404 in a more or less defective or insanitary condition. Dr. Walford states, with evident satisfaction, that ship-owners and masters willingly carry out the recommendations of the port sanitary authority, with the result that the proportion of vessels having sanitary defects among those which frequent the port has decreased in a most marked manner. At the end of January, 1902, four men suffering from beri-beri were removed from a Norwegian barque to the seamen's hospital. The vessel sailed from Rangoon in the previous September, calling at St. Helena on Oct. 16th. The first man sickened on Nov. 29th. Several samples of food and drinking water, together with some hair from each of the four men affected, were examined for arsenic, of which there was found distinct evidence in the samples of hair but not in the food or water. No cases of plague or of suspected plague were brought to Cardiff during 1902, although 17 vessels came from places which were either infected or suspected of being infected with plague. The medical officer of health examined 707 persons on these vessels and the systematic destruction of rats resulted in the cremation of 3835.

Damages against a District Council.

A case of some importance to sanitary authorities was heard before Mr. Justice Phillimore at the Cardiff assizes on March 27th. A man living in a detached house claimed £200 damages from the Llandaff and Dinas Powis rural district council because it had neglected to empty a cesspit receiving the sewage from several neighbouring houses. The cesspit is situated near the plaintiff's house and he asserted that the noxious gases which emanated from it had seriously affected the health of one of his children. The defence of the district council was that it was not its duty to cleanse the cesspit, that it had let the work of cleansing to a contractor, whereupon its liability ceased, and finally that the cesspit had been cleansed and any nuisance arising from it was due to defective construction. Judgment was given for the plaintiff for £30 and costs and an injunction was granted restraining the district council from permitting the continuance of the nuisance. The injunction was suspended pending an appeal by the council.

Bristol Royal Infirmary.

The annual meeting of the subscribers to this institution was held on March 25th, Sir Charles Cave presiding. The medical report stated that during 1902 the in-patients numbered 3281, against 3246 in 1901. 41,761 out-patients were treated, compared with 41,863 in the previous year. 531 patients were sent to the Victoria Jubilee Convalescent Home—an increase of 114 over 1901. The financial statement showed that the total ordinary income amounted to £11,125, against £11,467 in the previous year. The total ordinary expenditure was £15,415, compared with £15,252 in 1901. The total adverse balance against the institution now amounts to £11,253. The report, in alluding to the annual deficiency in the working of the infirmary, adds that unless greatly increased financial support is forthcoming the committee will be obliged to reduce the work of Bristol's oldest medical charity.

Bristol Workhouse Infirmary.

Reference has already been made in THE LANCET of Oct. 4th, 1902, p. 962, to the extremely unsatisfactory accommodation provided by the Bristol board of guardians for the sick poor and imbeciles under its care. With the exception of 36 beds in a stone building and the maternity wards the whole of the infirmary accommodation at the Eastville workhouse consists of wooden buildings or of corrugated iron buildings lined with wood and felt. Nearly 150 more or less helpless patients are housed in these erections. Mr. E. B. Wethered, an inspector of the Local Government Board, has recently reported in very strong terms upon the dangerous character of the buildings and expressed the opinion that in the event of a fire occurring it would be practically impossible for the occupants of the wards to be rescued without loss of life. In a letter to the board of guardians forwarding this report the Local Government Board states that it cannot take the responsibility of allowing the use of the present buildings for a longer time than is absolutely necessary to enable suitable infirmary buildings of a permanent character to be provided. Land has already been secured for the erection of an infirmary sufficient for the needs of the entire union, detailed plans have been drawn, and as long ago as obtained." The Local Government Board has placed the County Antrim Infirmary on its list of hospitals the training of which gives the status of "qualified nurses" for union hospitals in Ireland.

April 1st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Acoustics of the Great Hall of the Academy of Medicine.

AT a sitting *in camerâ* of the Academy of Medicine which was held on March 17th, M. Javal read a report on the acoustics of the great hall of the Academy of Medicine. The report had been drawn up by the section of Physics and Chemistry. He mentioned in his report that the commission which had been appointed to consider the matter came at once to a unanimous conclusion. The commission has formulated various propositions for diminishing the excessive echo and recommends that those should first be carried out which will entail but little expense. It recommends that the speaker's platform should be placed on the right side of the hall. It was so placed on the opening day and everyone present was able to hear with perfect distinctness the report which was read by the secretary from the platform when in this position. The commission also recommends that the bottom of the hall should be hung with drapery for the time being, that the floor should be covered with a thick carpet, and that underneath the sky-light cotton threads which would hardly be seen should be stretched. In this way it is probable that the constant echoes of sounds produced in the hall would be much lessened. At present the sound waves are reflected at varying angles from the floor to the sky-light and to the walls and back again and vibrations are set up in the thick glass of the sky-light and in the xylolith which covers the flooring. The commission also recommends that the lamps hanging from the ceiling should be removed, as those at the desks give quite light enough. The panes of the sky-light should be of very thin glass. Finally, the commission recommends that the four seats at present occupying the upper part of the central gangway should be removed as they render exit difficult and are thus the cause of noise; moreover, the small rooms on the ground floor should be shut off by curtains.

Oxygenated Water.

At the meeting of the Academy of Medicine held on the same day M. Lucas-Championnière laid before the meeting some researches by M. Maget and M. Planté on the Use of Oxygenated Water employed as a Spray for the Disinfection of Tortuous Cavities. It was thought that the heating and the nebulisation of the solution would cause it to lose most of its oxygen and, consequently, most of its disinfective power; as a matter of fact, the spray of oxygenated water contains only a portion of the oxygen contained in the original solution M. Maget and M Planté sought by experiment to discover how much oxygen was lost by distillation and they found that in oxygenated waters (solution of hydrogen peroxide) containing from nine to 11 volumes of oxygen the distillate contained from 0·20 to four volumes of oxygen. The average quantity found in the distillate varied between one and two volumes. Although from these results it may be estimated that the quantity of oxygen in the spray would be but small yet there is enough to give it a real therapeutic value. M. Lucas-Championnière performed some control experiments and found that his results on the whole were comparable to those of M. Maget and M. Planté. As a rule though, he obtained smaller quantities of oxygen in his distillate than they did. M Lucas-Championnière considers that the net result of all the experiments is to show that solutions of hydrogen peroxide have a real therapeutic value, even when used as spray.

The Treatment of Lead Colic by Electric Rectal Injections.

At the meeting of the Hospitals Medical Society held on March 20th M. Galliard read a note upon the above-mentioned subject. He had had a patient under his care in whom it was doubtful whether the diagnosis should be lead colic or appendicitis. The patient had had no motion of the bowels for five days and for 36 hours had not even passed any flatus, so M. Galliard determined to try an electric rectal injection. The success of this treatment was very rapid and so M. Galliard determined to try it on three other patients who were undoubtedly suffering from lead colic. In all three the treatment acted well, the pains ceased, and the bowels rapidly regained their power after one or more electric injections. M. Galliard considers that this method of treatment is preferable to the purgatives which are generally used, for these latter are, as a rule, not well borne and in addition are very prone to irritate the intestinal mucous membrane. M. Moutard-Martin, in his speech on the matter, said that in his opinion if these electric injections could be employed without danger in cases of lead poisoning they must, on the other hand, be forbidden in cases where there was reason to suspect the existence of appendicitis.

The Operative Treatment of Irreducible Dislocations of the Elbow joint.

At the meeting of the Surgical Society held on March 25th M. Picqué, speaking on the operative treatment of irreducible dislocations of the elbow-joint, said that he had always been an advocate for resection as against simple incision (*arthrotomie*), of which the results were generally bad. M. Picqué always uses a median posterior incision which divides the triceps and which necessitates freeing that muscle at its insertion into the olecranon. He had never found any inconvenience result with regard to the future capability for use of the limb It is true, however, that operating with this incision presents more difficulty than when other incisions are used, for when it is used it is by no means easy to free the lower end of the humerus from the tough fibrous adhesions which surround it. With regard to his latter point, M. Picqué thinks that very possibly operation by lateral incisions offers some advantages.

Obituary.

French science has suffered a severe loss by the death, which occurred recently, of Dr. Georges Bouilly, surgeon to the Cochin Hospital. He was 54 years of age and succumbed after a long and painful illness. He was one of the most skilled gynæcologists of the day, and although he was not spared to publish the great treatise on gynæcology which he had in preparation, yet he had written much in the various reviews on particular points of his specialty.

March 31st.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Medical Profession and the Sick Clubs.

THE Deutscher Aerztevereinsbund, or German Medical Practitioners' Association, held an extraordinary meeting in Berlin on March 7th, Professor Löbker of Bochum being in the chair. The meeting was attended by 347 delegates from every part of Germany, representing about 19,000 medical men. It was convened principally for the purpose of protesting (1) against the new Bill relative to the insurance of workmen; and (2) against the habitual indifference displayed by the Government towards the wishes of the medical profession. Professor L [illegible] bject said that although legislati [illegible] clubs and to the insurance of [illegible] involved questions possessing an obvious interest for medical practitioners the Government had taken no steps whatever to ascertain their views as to the manner in which they might be affected by the various enactments and seeing themselves thus ignored in matters which deeply concerned them it was desirable that they should consider what course was requisite for resisting encroachment and protecting their interests. Their patience was rapidly becoming exhausted and there was every probability that without their coöperation the scheme for the insurance of workmen would fail. In the discussion the "free choice system" in club practice was generally recommended as supplying the relatively best protection against the high handedness of the clubs and in conclusion a resolution to the following effect was unanimously adopted:—

[illegible]

The meeting was evidently disposed to uphold [illegible] just rights of medical practitioners The success of the strike of medical men at Gera (to which allusion was [illegible] in and Apportionment of New York has appropriated the sum of $3,000,000 (£600,000) to be expended in constructing a new Bellevue Hospital and a sum of $500,000 (£100,000) has also been appropriated for new buildings for Fordham Hospital. Both of these hospitals are city charitable institutions. It seems that New York will at last have public charity hospitals in keeping with her wealth and size. The management of Bellevue Hospital and the allied city hospitals is said to have much improved under the new *régime*.

New York State Nurses Bill.

An amendment to the Public Health Law of New York State is now before its Legislature. The new Bill provides for the appointment of a board of examiners by the regents of the University of the State of New York who shall test the fitness of candidates to register as nurses. A candidate in order to be eligible for examination must be over the age of 21 years, of good moral character, and must hold a diploma from a training school for nurses connected with a hospital giving a course of at least two years. Eligible candidates after having passed the examination will be granted a certificate by the regents which will authorise them to practise as, and to style themselves, registered nurses, but no other person may assume this title. Upon recommendation of the board of examiners the regents of the State of New York may in their discretion waive the examination of any persons possessing the afore-mentioned qualifications who shall have graduated before, or who are in training at the time of, the passage of this Bill and who shall apply in writing for such certificate within three years after the passage of this Bill. It is hoped that this Bill, if passed, will put an end to many of the abuses which now exist in New York State with regard to so-called trained nurses.

March 24th.

Obituary.

THOMAS JOHN MACLAGAN, M.D. EDIN., M.R.C.P. LOND.

IN the last issue of THE LANCET we recorded the death of Dr. Thomas John Maclagan, which took place on March 20th at his residence, 9, Cadogan-place, S.W. Dr. Maclagan received his medical education at the University of Edinburgh where he graduated M.D. in 1860, but he afterwards studied at Paris, Munich, and Vienna, and after some time spent in Dundee finally settled down to practise in London. He was physician-in-ordinary to their Royal Highnesses the Prince and Princess Christian of Schleswig-Holstein and was also for some time examiner in medicine at the University of Aberdeen. He is best known to the medical profession by his work on rheumatism and as the introducer, or rather renewer, of salicin in the treatment of that disease. The use of this drug he described in THE LANCET of March 4th (p. 342) and 11th (p. 383), 1876. In view of the most modern theories as to the cause of rheumatism it is interesting to note that Dr. Maclagan in 1876 wrote as follows: "Rheumatic fever is nowadays generally regarded as being produced by some cause or agency which is generated within the body. My own investigations into its pathology have led me to reject this view and to adopt the old 'miasmatic' view of its mode of origin, according to which the cause which gives rise to the disease is introduced into the system from without." Arguing from this idea and from the idea that as the cinchonaceæ grew most plentifully in regions where malaria prevailed so also possibly some plant which grew plentifully in regions where the "rheumatic miasm seemed most to prevail" would prove effective, he was led to try the salicaceæ. Decoction of willow bark had, of course, been known as a "cure" for rheumatism for many years previous to 1876 and the use of salicin is nowadays almost superseded by the salicylates, but still Dr. Maclagan would seem to have been the first to draw the attention of the medical profession to the use of salicin in modern days. His views as set forth in the paper from which we have quoted were afterwards expanded in a book entitled "Rheumatism, its Nature, Pathology, and successful Treatment." Dr. Maclagan has left a widow, three sons, and a daughter. His body was buried on March 24th at Woking, the first part of the burial service being said at St. Paul's, Knightsbridge.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Crolas, professor of pharmacology in the Medical Faculty of Lyons.—Dr. Bonamy, chief medical officer of the Nantes hospitals.—Dr. Juán Giné y Partagas, professor of external pathology in Barcelona, and one of the most eminent surgeons in Spain.—Dr. Raingeard, surgeon to the Nantes hospitals.—Dr. F. Cramer of Wiesbaden, formerly assistant to Professor von Langenbeck.—Dr. Julius Victor Carns, professor of zoology in Leipsic, in his eightieth year. He was for a short time some 50 years ago curator of the Comparative Anatomy Museum, Oxford.—Dr. T. G. Thomas, formerly professor of gynæcology and obstetrics in the New York College of Physicians and Surgeons.—Dr. M. Crisafulli, professor of clinical medicine in the Messina Medical School.—Dr. Bouilly, surgeon to the Paris hospitals.—Dr. Fritz Stockmann of Königsberg, author of many papers on renal diseases.—Dr. Walther Ruschaupt, assistant in the Breslau Pharmacological Institute.

Medical News.

UNIVERSITY OF ABERDEEN.—The following candidates were successful in the examinations indicated:—

I. (*a*) *First Professional Examination.*—Henry Begg, William Begg, Francis J. Browne, James M'K. Clark, George Cooper, James Donaldson, Robert J. Duthie, Herbert W. Glashan, Stephen Goodbrand, Alfred P. Hall, Leighton H. Hay, Dalziel B. M'Grigor, James R. M'Kenzie, Douglas J. Marr, John H. Moir, Alexander Noble, A. N. E. Rodgers, David M'D. Roger, Henry Smit, Frank P. Sturm, Robert Watson, and William A. Watson.

(*b*) *First Part of the First Professional Examination.*—Thomas Clapperton, Andrew L. E. F. Coleman, Thomas Donaldson, Theodore G. Gray, George H. C. Lumsden, Robert W. Macpherson, Angus Macrae, George Mitchell, John J. A. Neil, Robert Ross, and Ernest Walker.

II. (*a*) *Second Professional Examination.*—Mary R. Bisset, *Robert Brown, William Campbell, Alexander Dawson, Hubert K. W. H. Dornhorst, Robert R. Duncan, William G. Gordon, Neil Kennedy, Alexander W. Laing, William Low, James B. Macdiarmid, Roderick Mackay, James Mackenzie, Kenneth Mackinnon, George Milne, Alexander Mitchell, Harry R. Neilson, Alexander D. Pringle, John Proctor, *William E. Reid, James Silver, James A. B. Sim, *Robert H. Spittal, John Herbert Stephen, Isaac F. B. de Villiers, *Frederick H. Welsh, and Lisette A. M. Wilson.

(*b*) *First Part of the Second Professional Examination.*—James Adams, Alexander Brown, Charles B. Gerrard, James M'Intosh, John A. Milne, Paul B. Roth, John Sangster, and Robert N. Thomson.

III. (*a*) *Third Professio* [illegible] F. Anderson,
Francis Anderson, Jo [illegible] William R.
Catto, Alexander G. [illegible] Davidson,
Alexander Duguid, Al [illegible] eorge Hall,
Alexander Hendry, Jol [illegible] Thomas C.
Innes, Herbert M. Ja [illegible] Hernaman
Johnson, *Frederick [illegible] on, Donald
Mackay, Malcolm Mac [illegible] chael B. H.
Ritchie, James Rober [illegible] rtie R. G.
Russell, Herbert W. [illegible] M. Smith,
John M. Taylor, and *William Wood.

(*b*) *First Part of the Third Professional Examination.*—George Adam, Walker A. Elwood, and James H. Thomson.

IV. *Fourth Professional Examination:* (*a*) *Degree of M.B., Ch.B.* (New Regulations).—William Anderson (Kinbore), Frank W. Begg, Hugh S. Brander, Arthur J. Grant, Charles W. F. Gray, John J. Harris, George Hendry, George G. Macdonald, James F. M'Intosh, John A. M'Kenzie, *Hugh Maclean, Gordon W. Maconochie, William Mearns, Kenneth S. Melvin, George Mitchell, Andrew B. Morris, William F. Munro, Adam S. Niven, Alastair G. Peter, William R. Pirie, James H. Shepherd, Frederick K. Smith, William Stewart, George Stoddart, Cornelius A. Suvoong, and William A. Watson.

(*b*) *Degree of M.B., C.M.* (Old Regulations).—John Fraser and Julius E. Perera.

* Passed with distinction. † Passed with much distinction.

TRINITY COLLEGE, DUBLIN.—At examinations held recently the following candidates were successful:—

Diploma in Public Health, Part I.—George Raymond, Thomas G. Moorhead, Kingsmill W. Jones, Albert L. Hoops, Walter C. Oram, John N. Laird, Robert G. H. Tate, and Thomas F. Telford.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following candidates have passed the Primary part of the Fellowship examination:—

W. W. Boyce, R. A. Brown, R. Bury, J. S. Dunne, G. H. Gallagher, and J. M. Hayes.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Bernhard Heine has been recognised as *privat-docent* of Otology and Dr. Paul Schuster as *privat-docent* of Diseases of the Nervous System.—*Bologna :* Dr. Lodovico Beccari has [illegible] Forensic Medicine. [illegible] sition as Extra- [illegible] August Luxen- [illegible] of Surgery.—*Naples :* Dr. Teodorico Rosati of Rome has been recognised as *privat-docent* of Laryngology and Otology.

ROYAL INSTITUTION.—The following are among the lecture arrangements at the Royal Institution after Easter:—Dr. Allan Macfadyen, three lectures on the Blood and some of its Problems; Professor G. H. Darwin, two lectures on the Astronomical Influence of the Tides (the Tyndall lectures); Professor E. J. Garwood, two lectures on the Work of Ice as a Geological Agent; Professor Dewar, three lectures on Hydrogen—Gaseous, Liquid, and Solid; Professor S. H. Vines, two lectures on Proteid Digestion in Plants; and Professor Silvanus P. Thompson, two lectures on the De Magnete and its Author, (1) the Book, and (2) the Man. The Friday evening meetings will be resumed on April 24th.

DONATIONS AND BEQUESTS.—Under the will of Mr. Henry Baker Hicks of Bristol, after the death of his widow, the following legacies are to be paid: to the Bristol Eye Hospital, £100; to the Bristol Dispensary, £150; and the Bristol Royal Infirmary and the Bristol General Hospital will each receive £1000.—The Pendlebury Hospital for Children, Manchester, the Manchester Hospital for Consumption and Diseases of the Throat and Chest, and the Northern Counties Hospital for Chronic and Incurable Diseases will each receive £500 under the will of Mr. F. Boden Benger of Knutsford.—Mr. J. McIntyre, M.D. St. And., has by his will bequeathed £1000 to the Royal Medical Benevolent College Pensioners' Fund and a like sum for a cottage hospital at Odiham, Hants.

PRESENTATIONS TO MEDICAL PRACTITIONERS.—Mr. Colston Wintle, L.R.C.P. Lond., M.R.C.S. Eng., on March 16th was presented with a timepiece at the first annual dinner of the Horfield and Bishopston (Bristol) Horticultural, Feather and Fur Association in recognition of his labours on behalf of the association and its exhibition.—The members of the Cockington (Torquay) Men's Branch of the St. John Ambulance Association have presented Mr. George Henry Cressey, L.R.C.P. Lond., M.R.C.S. Eng., with a surgical electric lamp as a mark of appreciation for his services as honorary lecturer.—Mr. W. Ffennell MacCarthy, M.D. Dub., who has recently resigned the office of surgeon to the Sir John Moore Lodge of Oddfellows (Worcester Branch) after 20 years' service, was on March 23rd presented with a framed illuminated testimonial by the members of the lodge.

ACTION TO RECOVER MEDICAL FEES.—At the Wolverhampton county court on March 27th Mr. Thomas Wolverson brought an action to recover £4 19*s*., being his fees for medical attendance on a family. On Nov. 28th, 1902, two of the children fell ill with scarlet fever and the parents were advised by both the plaintiff and his son, Mr. John A. Wolverson, to have them removed to the isolation hospital, but the recommendation was not followed. On Dec. 21st the defendant's wife fell ill and he thereupon called in Dr. Edwin Morton who came to the conclusion that the children and their mother suffered from diphtheria and not from scarlet fever. Mr. Wolverson was then informed that his services, which had been retained for the approaching confinement of the defendant's wife, would not now be required and payment of his account was refused on the ground of unskilful treatment. At the trial the question of diagnosis was not pressed, the defence now alleging that the plaintiff ought to have advised the family to quit the house as the drains were out of order. In the result the judge said that the plaintiff had advised the defendant to complain to the sanitary authorities about the drains. He came to the conclusion that the children were properly treated and he gave judgment in the plaintiff's favour for the amount claimed. The plaintiff's case was managed by the Medical Defence Union.

ROYAL DENTAL HOSPITAL.—The annual general meeting of governors was held at the hospital, Leicester-square, on March 31st, Lord Kinnaird being in the chair. The committee of management reported a very large increase in the number of patients during the past year, there being 15,244 more cases treated than in 1901 and a corresponding increase in the working expenses. The consent of the Charity Commissioners and of the Prudential Assurance Company, which holds a mortgage on the property, having been obtained, the "Duke's Head," a public-house on the premises, has been closed as a public house and the licence destroyed. The friends of the hospital must not let the charity be a loser *by this step.*

UNIVERSITY OF LONDON.—A meeting of the Faculty of Medicine was held at the University, South Kensington, on March 27th, Mr. Henry T. Butlin, the Dean of the Faculty, being in the chair. Dr. J. Rose Bradford and Dr. J. Kingston Fowler were unanimously re-elected as representatives of the Faculty upon the Senate. In thanking the Faculty for the renewed expression of its confidence, Dr. Fowler referred to the fact that the work of the Senate in reorganising the curriculum and scheme of examinations for degrees in medicine and surgery was practically completed and stated that the new regulations shortly to be issued would be found to contain most of the modifications recommended by the Faculty. He felt sure that the Faculty would be gratified by the announcement made at the last meeting of the Senate that their Royal Highnesses the Prince and Princess of Wales had signified their willingness to accept the honorary degrees of Doctor of Law and Doctor of Music respectively. The Dean presented a report showing that satisfactory progress had been made in the negotiations between the Senate and the Faculty with regard to the establishment of a university institute to provide common courses of instruction for internal students and others in the preliminary and intermediate subjects of medical education.

THE MEDICAL GRADUATES' COLLEGE AND POLYCLINIC.—The annual general meeting of the Medical Graduates' College and Polyclinic was held at the college, 22, Chenies-street, [illegible] H. Broadbent, Bart [illegible] those present were [illegible] Taylor, the honorary treasurer, and Captain A. E. Hayward Pinch, I.M.S., the medical superintendent. The report showed that the number of members and subscribers had increased from 825 in 1901 to 941 and an increase was noted in all departments of the college work. The chairman, in moving the adoption of the report, pointed out that every year brought something new which was worthy of the attention of practitioners. Blood examinations had now become matters of extreme importance, for examination of the blood told them much about clinical diseases. In all these matters great light had been thrown upon disease and great aid was obtained in treatment. The consultations carried on at the Polyclinic were interesting, but were a poor substitute for the kind of work that ought to be carried on. He had never ceased to hope that sooner or later they would have a [illegible] tions [illegible] on the [illegible] Hospital was endeavouring to meet this kind of want and it had their sympathy in the work it was trying to carry out. Referring to the composite course of lectures in medicine and surgery he said that they seemed to him of great service, but his only fear about them was lest they should swamp the clinical teaching. Lectures, however good, were not the best kind of teaching unless they were associated with demonstrations affording objective teaching. Sir William Kynsey seconded the motion. Dr. Seymour Taylor, the honorary treasurer, said that *the institution needed money* and unless it was obtained they would have to close their doors. A proposal was then made that members should pay two guineas per annum instead of one as at present. The chairman said that he thought that if the subscription were raised the financial question would be solved. He did not think that there was any great risk of catastrophe. The report and balance sheets were adopted.

Dr. Robert [illegible] Library

Parliamentary Intelligence.

HOUSE OF LORDS.

THURSDAY, MARCH 26TH.

Physical Tests for Army Recruits.

The Earl of **HARDWICKE**, Under-Secretary of State for War, in answer to a series of questions on this subject said that the present standard of height for recruits entering the infantry of the line was 5 feet 3 inches; it was the same in January, 1899. He could not give the average chest measurement of recruits during the past year, because a new system had been introduced. Under the old system no recruit was accepted, except as a special, whose minimum chest measurement was less than 33 inches. But in accordance with the report of a committee of military and civilian doctors another system was introduced on April 1 last year. The chest was measured first when fully expanded; secondly, when relaxed; and if there was a difference of not less than two inches between the two measurements the recruit was accepted, whereas if it were less than two inches he was not accepted. Since the introduction of this system no man had been accepted who did not comply with those conditions. In future it was intended to issue a return showing the average height, chest measurement, and the weight of every recruit on enlistment. Then after he had completed six months' service and gone through gymnastic training he would again be measured and if he had not, according to the requirements laid down by the committee, increased his physical development to the extent considered necessary he would not be allowed to remain in the army.

HOUSE OF COMMONS.

WEDNESDAY, MARCH 25TH.

The Royal Commission on Tuberculosis.

Mr. **LONG**, in reply to Mr. **FIELD**, said he was informed that it was impossible to state definitely at present when the report of the Royal Commission on Tuberculosis would be issued.

THURSDAY, MARCH 26TH.

The Sale of Poisons.

Mr. **JAMES O'CONNOR** asked the Home Secretary whether he would consider the advisability of introducing a Bill for the purpose of increasing the restrictions upon the sale of poisons.—Mr. **AKERS-DOUGLAS** replied: The hon. Member will be aware that a departmental [illegible] Lord President recently reported upon [illegible] the sale of poisons. That report is now [illegible] Some of the recommendations of the committee are in the direction indicated in the hon. Member's question.

The Quality of Alcoholic Liquors.

Mr. T. M. **HEALY** asked the Chancellor of the Exchequer if he would say what supervision, if any, the Government exercised in regard to the nature and quality of the whisky and other spirits consumed by the public; if he had any official reports showing that the increase of lunacy and crime in this country was largely due to bad drink now being sold as genuine malt whisky and brandy; whether he would cause inquiries to be made as to the laws in force in other countries for the protection of the public against the sale of deleterious blends and other objectionable alcoholic liquors; whether the Excise Department possessed a record of the materials used in distillation by every distillery in the three kingdoms; and, if so, whether he would grant a return showing the nature of those materials used by each distiller for the year 1902.—Mr. **RITCHIE** replied: The Government does not exercise any supervision as regards the nature and quality of the whisky and other spirits consumed by the public, the provisions of the Sale of Food and Drugs Act in this connexion being administered by the local authorities. I am not aware of any such reports as those to which the hon. and learned Member refers and I do not think that a return of the legislation in other countries would be likely to serve any useful purpose. The revenue authorities possess a record of materials used in distillation, and the totals are published annually in the statistical abstract. A return of the materials used by each individual distiller would be a very invidious one, and I cannot think it desirable.—Mr. **HEALY**: Does not the right hon. gentleman consider that the fact of such a return being invidious is the very reason why it ought to be published? Then the honest man would have a chance.—Mr. **RITCHIE**: I have no doubt that individual purchasers can easily protect themselves if they choose to go the right way about it.—Mr. **HEALY** asked the right hon. gentleman whether he had any official reports showing that guarantees and statements as to age affixed by blenders to whisky bottled in bond were often false or exaggerated, and, if so, whether he would explain why such marking of whisky was allowed under Government auspices where age was a vital point; why the Revenue Boards of Customs and Excise refused to guarantee officially the age of whisky bottled in bond which they knew to be correct but allowed incorrect descriptions to be used by blenders; whether he was aware that certificates of analysis from leading analysts to give colour to frauds were often placed on the bottles, also under Government supervision; and whether he would issue instructions to put an end to all these practices in Government warehouses?—Mr. **RITCHIE** replied: I am not aware of any such official reports as those to which the hon. and learned member refers. The question of exercising control over labels affixed to goods in bond is one which cannot possibly be adequately discussed within the limits of an answer to a question. The practice of the Revenue Boards is to limit themselves almost entirely to prohibiting the use of labels implying any Government guarantee of accuracy, and to preventing any gross misdescription of foreign spirits as British and *vice versâ*. I cannot undertake to alter this practice, for the reason (amongst others) that the moment spirits have been taken out of bond the control exercised by the boards must cease.—Mr. **HEALY** said that a predecessor of the right hon. gentleman some 12 or 15 years ago appointed a select committee to go into this subject and he asked whether the right hon. gentleman would now grant a departmental committee or a committee of the House to make some fresh inquiry into the new evils which had arisen.—The **CHANCELLOR** of the **EXCHEQUER**: I shall always be willing to consider representations that may be made with regard to inquiries into this or any other matter. If any further communication between the hon. and learned gentleman and myself should lead me to believe that some good could be accomplished I should be pleased to entertain his suggestion.

The Military Hospital at Alton.

Questions were addressed to the Secretary of State for War as to this hospital, built during the war with money subscribed by the public.—Mr. **BRODRICK** explained that there had been delay caused by [illegible] terms on which the hospital would be handed [illegible] in this connexion had now been overcome and [illegible] that the building would be used as a permanent hospital.

The Medical Service of the Navy.

On the vote for the medical establishments and services of the navy Mr. **KEARLEY** suggested that instructi [illegible] work to men of all classes in the navy [illegible] had taken any steps to secure a rese [illegible] war.—Sir **JOHN COLOMB** supported the suggestion as to instruction in ambulance work.—Mr. **ARNOLD FORSTER**, Secretary to the Admiralty, said that it had been under consideration whether more instruction in ambulance work might not be given in the navy, and steps had been taken to increase the hospital staff and sick bed attendance in time of war by the employment of volunteers. The question of a reserve of doctors had not escaped the attention of the Admiralty. As a matter of fact, steps had already been taken to institute such a reserve and they had had a most gratifying response from the medical profession; a large number of medical men had already signified their willingness to undertake duty under the conditions laid down by the Admiralty.—Mr. **GROVES** raised the question of members of the Navy Medical Service being given opportunity from time to time for bringing themselves up-to-date with modern treatment.—Mr. **ARNOLD FORSTER** said that the Admiralty considered it very important that their medical officers should have this up-to-date training and in order that they might obtain it the Admiralty had received the sanction of the Treasury to make provision for not less than 50 medical officers each year to attend post-graduate courses of instruction at medical schools.

Vaccination and Government Service.

Mr. **CORRIE GRANT** asked the Secretary of State for War whether he was aware that clerks of works on the Royal Engineer civil staff had been ordered to be vaccinated on penalty of dismissal, and if so, would he state whether this order had been issued with his sanction.—Mr. **BRODRICK** replied: Nothing is known of any such specific cases. The general officer commanding the Home District issued orders about a year ago during the small-pox epidemic that such clerks were not to be taken on if they refused vaccination.

FRIDAY, MARCH 27TH.

Vaccination Proceedings.

Sir **CHARLES M'LAREN** asked the President of the Local Government Board if his attention had been called to representations of the Hinckley guardians as to the state of the law as to the control of vaccination officers; and whether he would take steps to prevent these officials engaging legal advisers without consultation with or the consent of the guardians.—Mr. **LONG** replied: My attention has been called to representations made by the guardians on the subject. As regards the last part of the question, I must point out that the duty of the vaccination officer [illegible] cases of default is quite independent of any direct [illegible] In cases where th guardians are opposed to [illegible] Vaccination Acts it would obviously be impos [illegible] officer to carry out the duty referred to if he had to obtain the consent of the guardi to the legal assistance which was requisite for the purpose, and I am advised that it is a necessary incident of the statutory duty of vaccination officer that he should have authority to engage legal assistance where this is required.

MONDAY, MARCH 30TH.

Poor-law Administration in Ireland; Commission to be Appointed.

Dr. **THOMPSON** as [illegible] Ireland if he would [illegible] to inquire into the [illegible] also into the question of the administration of the Poor-law, [illegible] dition of the workhouses, and [illegible] management of t [illegible] poor in these institutions.—[illegible] Government [illegible] about to appoint a commissio [illegible] question of [illegible] amalgamation of unions and [illegible] condition of [illegible] classes of destitute poor in [illegible] ce of the Ir [illegible] Poor-law medical officers, whi [illegible] the ratepay [illegible] expense, [illegible] the law on t [illegible] subject w [illegible] see it bro [illegible] hoped to [illegible]

TUESDAY, MARCH 31ST.

Sale of Adulterated Butter Bill.

This Bill was read a second time and referred to the Grand Co mittee on Trade. In the course of the debate Mr. **HANBURY**, t Minister in charge of the Bill, undertook to consider whether, inste of saying that butter containing 20 per cent. of moisture should not sold and that the presence of 16 per cent. should create a presumpti in favour of adulteration, there should be inserted a standard of 18 p cent. applicable all round. He also undertook to consider whether was desirable in the public interest to have milk-blended bu labeled as the Bill proposed as [illegible] "blended" butter. On the wh the Bill was well received by [illegible] likely that it will be conside [illegible] stage. Committee or when it comes bac [illegible]

The Volunteer Medical Service.

Mr. **REMNANT** asked the First Lord of the Treasury if he would con sider the advisability of including a volunteer medical officer am the members of th [illegible] appointed to consider t Volunteer Service. [illegible] fear I cannot promise include officers of [illegible] rps on the commission.

Royal Army Medical Corps.

Dr. **THOMPSON** asked the Secretary of State for War if he was a

[illegible]

ating to about 5s. The question of the grant of the 4s. mess ance to them is under consideration.

WEDNESDAY, APRIL 1ST.

Cremation and the Detection of Crime.

JOHN ELLIS asked the Home Secretary whether his attention had lrawn to the case of one Severin Klosowski, who was convicted on 19th of murder by poisoning, in connexion with whose two bodies had been exhumed after burial of some years, spect of which grave suspicion attached to the prisoner milar poisoning; and whether, having regard to such he would take steps to secure that any rules and regulations l under Section 7 of the Cremation Act, 1902, should provide st cremation being used to destroy evidence of crime— AKERS [illegible] on 7 of [illegible]

[illegible]

detection of crime. The regulations will lie on the table for 40 before coming into force

Appointments.

[illegible] *ies of Public Institutions, able for this column, are ffice, directed to the Sub- Thursday morning of each* [illegible]

LAY, W. M., F.R.C.S. Eng., has been re-appointed Honorary [illegible]

[illegible] appointed Honorary Con- [illegible] Nose Department of the [illegible]

[illegible] C.S., L.R.C.P., has been [illegible] on Waterworks [illegible]

[illegible] en re-appointed [illegible]

[illegible] nted Certifying [illegible] District of the [illegible]

[illegible] Superintendent [illegible]

[illegible] istant Resident [illegible]

[illegible] ng., has been [illegible] rtment at the [illegible]

British Lyir [illegible]

n, J. L., [illegible] been appointed Physician t [illegible] of the Bristol [illegible]

[illegible] been appointed [illegible] on-Tyne School [illegible]

[illegible] ed

[illegible] ed

[illegible] to

[illegible] ed

[illegible] ed

[illegible] as [illegible] he

Vacancies.

urther information regarding each vacancy reference should be made to the advertisement (see Index).

INGHAM GENERAL DISPENSARY.—Resident Surgeon, unmarried. alary £150 per annum, and rooms and attendance.

INGHAM AND MIDLAND EAR AND THROAT HOSPITAL, Edmund- treet.—House Surgeon for six months. Salary at rate of £70 per nnum.

INGHAM WORKHOUSE INFIRMARY.—Assistant Resident Medical Officer. Salary £100 per annum, with apartments, rations, and ttendance.

FORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £100, with oard, residence, and washing.

HTON, ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke- oad.—House Surgeon. Salary £80, with board, lodging, and washing

CANCER HOSPITAL, Fulham, S.W.—House Surgeon for six months, renewable. Salary £70 per annum, with board and residence.

CARDIFF INFIRMARY.—Assistant House Surgeon for six months, renewable. Salary at rate of £75 per annum, with board, washing, and apartments.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistants for three months.

EAST SUSSEX COUNTY ASYLUM, Hellingly.—Senior Assistant Medical [illegible]

[illegible] board, residence, and washing.

GUY'S HOSPITAL DENTAL SCHOOL.—Travelling Scholarship. Value £100.

HOSPITAL FOR SICK CHILDREN, Great Ormond street, London, W.C.—House Surgeon, unmarried, for six months. Salary £20, with board and residence.

KING'S COLLEGE London.—Sambrook Medical Registrarship.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary £100, with board and lodging.

LEICESTER INFIRMARY.—Surgical Dresser for six months. Honorarium £10 10s., with board, apartments, and washing.

LIV [illegible] Surgeon, for [illegible]

MA [illegible] EASES OF THE [illegible] ysician.

NOR [illegible] DISEASES.— [illegible] annum, with board, lodging, and washing.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—House Physician; also House Surgeon for six months. Salaries at rate of 50 guineas a year, with board and residence. Also Physician to the Skin Department.

ROYAL EYE HOSPITAL, Southwark, S.E.—House Surgeon for six months, renewable. Salary 50 guineas per annum, with board and residence.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—House Physician, also Casualty House Surgeon (males), for six months, board, &c., provided. Also Resident House Physician, also Resident House [illegible]

ROY [illegible]

SCH [illegible]

ST. [illegible] washing.

ST. PETER'S HOSPITAL FOR STONE, &c., Henrietta street, Covent Garden, W.C.—House Surgeon for six months. Salary at rate of £100 a year, with board, lodging, and washing.

[illegible] se Surgeon. Salary £100, increasing, [illegible]

[illegible] White Horse street, Stepney, E.— [illegible] Salary £150 per annum, with rooms, [illegible]

[illegible] Officer of Health. Salary £250 per annum.

WEST HAM UNION NEW INFIRMARY, Whipps-cross-road, Leytonstone, N.E.—Assistant Medical Officer. Salary £150 per annum, with residential allowance.

WEST NORFOLK AND LYNN HOSPITAL, King's Lynn.—House Surgeon. Salary £100 per annum, with board, residence, and washing.

WEST RIDING ASYLUM, Menston, near Leeds.—Resident Clinical Clerk. Board and residence.

[illegible] Salary £70 per [illegible]

[illegible] Salary £110 [illegible]

Births, Marriages, and Deaths.

BIRTHS.

HAUGHTON.—On March 23rd, at Falmouth, the wife of J. Welby [illegible]

OW [illegible] wife [illegible]

SMI [illegible] ife of [illegible]

MARRIAGES.

CORNER—HENDERSON.—At Dundee, on the 31st March, Edred Moss Corner, F.R.C.S., youngest son of Francis Corner, Esq., M.D. Lond., to Henrietta, second daughter of James Henderson, Esq., The [illegible]

[illegible] arish church of St. Nicholas, [illegible] ld, vicar, assisted by the Rev. [illegible] M.B., Ch.M. Sydney, to Ethel [illegible] Mrs. J. C. Franklin Wright, [illegible]

DEATHS.

BARLOW.—On March 27th, at Orlebar, St. Peter's, Kent, Robert Barlow, M.R.C.S., aged 64 years.

HUGO.—On March 29th, at New Brompton, Kent, Edward Henry Hugo, L.R.C.P. Lond., M.R.C.S., L.S.A., in his 69th year.

HUNTER.—On March 25th, at Abercromby place, Edinburgh, James Adam Hunter, M.D. Edin., F.R.C.S. Edin., in his 80th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

TO MEDICAL FREEMASONS.

WE are asked to publish the following appeal:—The executors of the late Lieutenant-Colonel S. J. Flood, R.A.M.C. (Dr. Richard Flood of Bundoran and Mr. Arthur Tuffield of 5, Brunswick place, Cambridge) earnestly appeal to all medical Freemasons, and especially to those connected with the Royal Army Medical Corps, to give their votes to Samuel Basil Flood, youngest son of the above mentioned Lieutenant-Colonel Flood, at the April election to the Royal Masonic Institution for Boys, for although he obtained 3226 votes he was unsuccessful in October last. The late Lieutenant-Colonel Flood had seen much active service on the West Coast of Africa; he was a most ardent Freemason, having been connected with many lodges *in this country and in India. He died at the early age of 42 years*, leaving four young children very inadequately provided for. Votes will be gratefully received by Arthur Tuffield, 5, Brunswick-place, Cambridge.

LUKE writes: I do not know whether any steps have yet been taken to save the great wastage which there is in the medical votes for the Masonic charities. It is most desirable that some organisation should be initiated in this respect seeing that the profession always has been (*teste* Mr. R. F. Gould), is, and in the future will be to an infinitely greater extent (by reason of the establishment and popularity of medical lodges and especially of lodges founded in connexion with the great hospitals), a powerful factor in Freemasonry. I do not for a moment suggest that medical cases, simply because they are *medical* cases, should be given preference when any particular medical voter is personally interested in any particular case, but I do urge the creation of some organisation by means of which medical Freemasons who do not happen to be interested personally or through their friends in any candidate (and this must constantly happen) may know how best to dispose of their votes in relief of some distressed child of a brother practitioner and in the case of there being several medical candidates that they may be able to ascertain which case is in most pressing need of assistance. My immediate object, however, is to ask to be permitted to point out in the columns of THE LANCET that in the voting papers just issued occur the names of three medical candidates, namely, for the Royal Masonic Institution for Boys Samuel Basil Flood (with 3226 votes brought forward) and Cyril Patrick Hines (with 994 votes brought forward)—the name of the latter will be removed from the list of candidates if unsuccessful at this election under a law limiting the age of candidates to 11 years—and for the Royal Masonic Institution for Girls May Irene Mackay. I may add that I have ascertained that the names of the deceased fathers of these children were in the Medical Register of 1895.

A PROPOSED BACTERIOLOGICAL LABORATORY FOR PLYMOUTH.

A MOVEMENT has been set on foot having for its object the establishment of a bacteriological laboratory for Plymouth. At a recent meeting of the Plymouth borough council a petition on the subject signed by a large number of the medical men of the district was presented asking the council to establish a "municipal laboratory in which certain prevalent and infectious diseases could be recognised by modern bacteriological methods of examination."

WHY APPENDICITIS?

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent's letter in THE LANCET of March 28th, p. 936, asking me why I called the case described by me in THE LANCET of March 21st, p. 797, one of appendicitis my reasons are as follows: (1) the fæcal smell of the pus, showing it to be connected with the bowel; and (2) the adhesions which had formed were in the vicinity of the appendix. Elsewhere there were flakes of lymph but no adhesions, showing that except close to the appendix the peritonitis had not existed long enough for them to be formed.

I am, Sirs, yours faithfully,
Royal Infirmary, Windsor, March 30th, 1903. F. E. WOOD.

DOES SPITTING ON THE GROUND SPREAD TUBERCULOSIS?

To the Editors of THE LANCET.

SIRS,—We see notices up and down, which are an eyesore, requesting people not to spit about, and such notices should be unnecessary, as it is undoubtedly a dirty habit; but what I wish to point out is that such spitting decreases the danger of infection rather than increases it, for the following reason:—Suppose a person suffering from phthisis spits in the middle of the road, what happens?—the sputum dries and the bacilli are scattered about and cannot possibly arrive in sufficient numbers anywhere so as to cause infection; on the other hand, he spits into a handkerchief time after time, and at the end of the week he sends a dozen or so handkerchiefs loaded with tubercle bacilli to a laundry; surely these are a great source of danger? Someone says, let him spit into a disinfectant in a bottle. Now, is it likely anyone would care to take out a bottle in public and spit into it. Of course not, if he did so in a railway carriage everyone would get out at the next station. He might of course put his handkerchief in a disinfectant when he got home (if he happened to know he had phthisis), but in the meantime his pockets get full of bacilli and every time he pulls out his handkerchief a cloud of these are disseminated around into his—it may be—badly ventilated office, or wherever he happens to be.

I am, Sirs, yours faithfully,
Leytonstone, N.E., March 23rd, 1903. ARTHUR TODD-WHITE.

THE END OF A DISPUTE.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 28th, p. 932, the action between Mr. E. C. A. Baines and myself is described as one in regard to slander only, ignoring the (professionally) far more important factor of an alleged breach of contract with regard to which Mr. Baines has equally withdrawn every allegation.

I am, Sirs, yours faithfully,
W. LONGWORTH WAINWRIGHT.
Henley-on-Thames, March 30th, 1903.

LORD KITCHENER'S HOME-COMING.

THE proprietors of Bovril, Limited, have made an arrangement whereby the purchasers of bovril will be able to obtain an artist's proof of the picture by Mr. William Hatherell, R.I., entitled "Lord Kitchener's Home-Coming," at no more trouble to themselves than is required for the collection and forwarding of coupons of the aggregate value of one guinea. Until June 30th every bottle of bovril will bear a coupon varying in value in proportion to the size of the bottle; a 2-ounce bottle will bear, for example, a coupon for 1*s*. and a 16-ounce bottle a coupon for 5*s*. These coupons to the necessary value must be sent to the Bovril Company, when the picture will be forwarded. The proprietors of bovril have sent us a signed artist's proof of the picture which is an exceedingly well-executed reproduction of Mr. Hatherell's fine painting.

HEALTH RESORTS DURING SPRING.

To the Editors of THE LANCET.

SIRS,—Will you allow me to ask any of your readers what in their opinion is the best place (health resort and midland counties preferred) where the east wind during the spring can be avoided? I am a sufferer from insomnia and asthma chiefly and prefer a high and dry situation, protection from the east wind being the chief desideratum. Of course, the best place is where out-door exercise on level ground is obtainable, but I fear the requirements are difficult of attainment. Leamington is the only place which I can think of and I fear that one being relaxing. Shady walks are a *sine quâ non*, as the sun is my great enemy.

I am, Sirs, yours faithfully,
April 1st, 1903. MEDICUS.

◆

Anxious One.—We are unable to print our correspondent's question, but if her medical man likes to put the difficulties of the case before our readers he may obtain suggestions for treatment.

Etiquette.—When the appointment is vacant there is no reason in all the circumstances mentioned why our correspondent should not apply for it.

A. L. B. is thanked for his communication. The similarity had been pointed out to us.

ERRATUM.—In THE LANCET of March 21st, p. 837, appeared a letter from Mr. Hugh E. Hoare on "Cottage Homes for Pauper Children" in line 10 of which the words "barrack room" should have been *barrack school.*

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 2nd, 1903.

Date.	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rain-fall	Solar Radia in Vacuo	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Mar. 27	29·38	S.W.	...	84	58	43	48	50	Overcast
„ 28	29·55	S.W.	0·06	74	57	47	49	52	Overcast
„ 29	29·91	S.W.	0·13	101	58	45	47	47	Cloudy
„ 30	29·80	W.	0·20	99	54	45	45	47	Cloudy
„ 31	29·98	N.W.	0·15	93	50	43	45	48	Cloudy
April 1	30·04	S.W.	...	62	52	42	44	46	Overcast
„ 2	29·82	N.	0·19	47	45	44	42	45	Overcast

During the week marked copies of the following newspapers have been received: *Worcester Daily Times, Yorkshire Post, Westminster Gazette, Evening Telegraph (Dundee), Sussex Daily News, Northern Whig, Belfast News Letter, Dublin Times, Birmingham Post, Surrey Advertiser, Notts Guardian, Bristol Mercury, Dublin Express, Bradford Observer, Hereford Mercury, Daily Graphic, Sanitary Record, Local Government Chronicle, Mining Journal, Hertfordshire Mercury, Blackburn Daily Telegraph, Devon Gazette, Truth, &c.*

edical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

AY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. omas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), [illegible] a (2 P.M.), [illegible] Soho-square [illegible] ic (4 P.M.), [illegible] M.), London [illegible] 0 P.M.), St. [illegible] P.M.), West- [illegible] ity College [illegible] St. Mark's [illegible] udon Throat [illegible] id 2.30 P.M.),

[illegible]

30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), roat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

[illegible]

roat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, olden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square P.M.).

[illegible] P.M.), Middlesex [illegible] llege (9.15 A.M.), [illegible] lary's (10 P.M.),

ne Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the l London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

DAY (7th).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover- [illegible]

[illegible] ava.

[illegible] SOCIETY (London Institution, [illegible] Discussion upon the Present [illegible] There will be an exhibition of [illegible]

MATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavensh-square, W.).—5.15 P.M. Demonstration of Cases of Interest.

AY (10th).—THE INCORPORATED SOCIETY OF MEDICAL OFFICERS HEALTH (9, Adelphi-terrace, Strand, W.C.).—7.30 P.M. Council d Ordinary Meetings.

ECTURES, ADDRESSES, DEMONSTRATIONS, &c.

DAY (6th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC 2, Chenies-street, W.C.).—4 P.M. Dr. S. E Dore: Clinique. kin.) 5.15 P.M. Prof. A. E. Wright: On Therapeutic Inoculation.

DAY (7th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC 2, Chenies-street, W.C.).—4 P.M. Sir W. H. Broadbent: Clinique. Medical.) 5.15 P.M. Mr. D'Arcy Power: Cancer.

[illegible] POLYCLINIC [illegible] Clinique. [illegible] tening. [illegible] POLYCLINIC [illegible] son, jun.: [illegible] Anatomy, [illegible] ment.

EDITORIAL NOTICES.

is most important that communications relating to the orial business of THE LANCET should be addressed usively "TO THE EDITORS," and not in any case to any leman who may be supposed to be connected with the orial staff. It is urgently necessary that attention be n to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

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We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1902, which was completed with the issue of Dec. 27th, and the Title-page to the Volume, were given in THE LANCET of Jan. 3rd.

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The Hunterian Lecture

ON

THE SYMPTOMS AND DIAGNOSIS OF STONE IN THE KIDNEY.

Delivered before the Hunterian Society on Feb 25th, 1903,

By R CLEMENT LUCAS, M B, B S Lond, F R C S Eng,

SENIOR SURGEON TO AND LECTURER ON SURGERY AT, GUY'S HOSPITAL, CONSULTING SURGEON TO THE EVELINA HOSPITAL FOR SICK CHILDREN

[After thanking the President and council for the honour conferred upon him by selecting him to deliver the lecture Mr Clement Lucas proceeded as follows —]

Looking through the records of past lectures I find that the lecturer has generally chosen a subject in which he could claim some exceptional experience and he has then proceeded to give the results of his personal observations rather than a collection of the views of others This is very characteristic of John Hunter's own method, and endeavouring to act in this spirit I have chosen for my subject "The Symptoms and Diagnosis of Stone in the Kidney"

I will first relate the history of a typical case and then proceed to analyse the symptoms in detail, showing how greatly they vary in different instances and how important it is to weigh their relative value before arriving at a conclusion

A young man, 24 years of age, consulted me three years ago on account of attacks of pain and hæmaturia His parents were living and healthy and he had five brothers and sisters, also healthy and well He was brought up on a chalk subsoil Five years previously he injured his side at football but his symptoms did not commence till a year later He then first suffered from a severe attack of pain in his left loin running through to the front and into his groin and testis This lasted for three or four hours and then he got quite well. He did not notice any stone or gravel in his urine but it often had brick red deposits The second attack occurred about a year later and passed off in a similar way Since then he had had frequently recurring attacks, always on the same side He first noticed blood in his urine one and a half years previously after a game of tennis This had occurred at frequent intervals since especially after exercise Once or twice the hæmorrhage had followed the attacks of colic In the intervals he felt well but was afraid to exert himself in any way The attacks of colic always caused nausea and had once or twice induced vomiting His urine when examined by the microscope showed numerous crystals of uric acid and litholes but no blood or pus Acting on these symptoms I cut down on his kidney and removed a uric acid calculus weighing *48 grains*

I will now proceed to speak of the symptoms in detail

I Pain

Pain perhaps more often than any other symptom first draws attention to the existence of stone in the kidney Yet important as this symptom is its inconstancy, radiation reflection and tendency to cause sympathetic aching of the other organ, diminish its trustworthiness so that pain when considered alone is apt to lead rather to uncertain and incorrect conjecture than to exact diagnosis It will be necessary *to analyse very carefully* this symptom *before* drawing any conclusion from it

1 In the first place it should be noted that in a certain number of cases *pain may be altogether absent* Post-mortem records abound in cases in which patients dying from diseases of other organs were found to have calculi often of large size, imbedded in the kidneys which gave rise to no symptoms during life I will only allude to one brought before the Hunterian Society years ago, that of a man who died from a sarcoma of the heart who had an enormous calculus in each kidney that had given no evidence of their presence during the man's lifetime

To what can the extreme variability of the symptom of pain be attributed? Why is it that in one case a renal calculus may excite so little discomfort that the patient is unconscious of its presence whereas in another agony of the most distressing and excruciating character is caused by a stone in the kidney? I think that I shall be able to show that this variability of the symptom of pain depends upon two factors (1) the position of the stone and (2) its mobility or fixation

Taking the position of the stone first it can be shown that the secreting structure of the kidney possesses little sensibility and a stone firmly fixed in the fleshy part of the organ may excite little or no sense of pain I once had an opportunity of directly testing the sensibility of the secreting part of the kidney in a man whose kidney had been exposed by a wound in the loin He appeared to be quite indifferent to punctures of the fleshy part of the organ I have also frequently tested it during operations when the patient has been but *partly* under an *anæsthetic* *Provided that the* organ be not moved so as to drag on its nerves puncture of the cortical and medullary portions causes no evidence of pain Another way in which the sensibility of the solid parts of the kidney may be tested is when a very moveable kidney is met with in a very lax abdomen In these circumstances it is often easy to grasp the kidney in the hand and to compress it, when a sensation somewhat similar to that caused by squeezing a testis or an ovary is produced, but much less severe in character It must be remembered that the kidney lies behind the intestines and that in compressing it in this way the intestines are squeezed at the same time and pressure upon them may account for part of the pain induced The pelvis of the kidney and its branches are, however, acutely sensitive, and, as in the case of the urinary bladder, the most sensitive part is that immediately around the outlet A moveable stone impinging upon this point excites the most excruciating agony Very large branched stones may be met with occupying the pelvis and calices of the kidney which being firmly fixed have caused only aching pains, quite distinct from the agony of renal colic and it may be stated as a general axiom that the mobility of the stone is the chief factor in bringing about attacks of renal colic

2 The next point to be considered is that *pain to be of service in the diagnosis of renal calculus must be unilateral* It usually is so, but cases are met with in which with a stone imbedded in one kidney, the patient complains only of general backache or pain in the loin and is quite unable to distinguish one loin as being more painful than the other Such a case came under my notice three years ago The patient was 32 years of age and a very heavy drinker Six or seven years before he had suffered for some time from albuminuria following an attack of diphtheria 18 months before I saw him he suffered from backache and passed blood in his urine and was treated for congestion of the kidneys. He suffered also from headache Occasionally since he had noticed a little blood in his urine When I saw him in January, 1900 his urine was turbid when passed and contained an excess of phosphates, some mucus and a considerable quantity of albumin When questioned as to pain he put his hand on his spine in the hollow of his back and he was quite unable to distinguish the pain as greater on one side than the other This was just the case in which had the pain been unilateral the symptom would have been of value since he had shown signs indicating degenerative changes in his kidneys and his habits were such as to predispose to these pathological changes Yet it was not till three months later, though his attention was constantly drawn to the point that he would admit the pain to be greater on the left side than on the right and I then removed an enormous stone with five large processes from the pelvis of his left kidney a stone which I think must have been years growing to the size it had attained when I removed it.

3 *The character of the pain varies greatly in different cases* An aching gnawing pain extending from the loin through to the front on a lower level is what is most commonly complained of It begins at the lower edge of the last rib behind in the angle between this and the spine and is felt in front below the level of the umbilicus along the edge of the rectus muscle The explanation generally given of this pain is that it commences in the renal plexus and extends downwards along the ureter Whilst not denying this source of pain I think that the particular symptom is more correctly explained by reflection along the last dorsal nerve, which may be regarded as a protecting nerve to the kidney The almost certain relief of pain which follows on

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exploration with division of this nerve, where a stone exists but has been undiscovered at the operation, supports the explanation which I have suggested. Transference along the ilio-hypogastric or ilio-inguinal nerve would bring the anterior pain lower.

4. *Attacks of renal colic*, which are to be observed in their most acute form during the passage of a small calculus through the ureter, frequently occur at intervals as the result of a stone lodged in the kidney. As I have before explained, such attacks are most likely to occur as the result of a moveable stone dropping like a ball-valve over the outlet of the pelvis. Not only is the most sensitive part of the organ then struck but the ball-valve action obstructs the passage of urine and causes backward distension and pressure upon the secreting structure of the kidney. The sudden blocking up of half the urinary secretion tends to a uræmic condition which favours vomiting, a symptom which is also encouraged by the connexion of the pneumogastric nerve with the renal plexus.

It must not be concluded that attacks of renal colic only occur from a loose stone in the pelvis of the kidney. They occur in a modified form when a stone lies loose in a dilated cavity. Calculi by blocking the outflow of urine may cause hydronephrotic cavities behind them in any part of the kidney; for it is one of the most curious and interesting facts in physiology that the secreting force of the kidney is sufficiently strong to destroy the secreting structure by the backward pressure of the fluid it has secreted. A stone becoming loose in one of these cavities and being driven into the narrow sensitive neck of the calyx through which it cannot pass gives rise to attacks of renal colic though not so severe as those in which a stone drops on the outlet of the pelvis. Attacks of colic dependent on stone may also be caused by hæmorrhage when it occurs with such rapidity as to coagulate within the kidney. The passage of such clots may excite severe pain.

Nephritic colic in its most characteristic form gives rise to the most intense distress, commencing in the loin and extending downwards to the groin and testis. The patient doubles himself up and groans with agony or rolls about tossing the bed-clothes and twisting over and over in his endeavour to gain a position of rest. Nausea, retching, and vomiting occur, followed by fainting and collapse. Beads of perspiration stand out on his forehead and the surface of his body is cold and moist. Retraction of the testis towards the inguinal canal may be noticed, consequent on spasm excited in the cremaster muscle, but it is by no means a constant symptom and occurs much more frequently in boys than in adults. Frequent micturition and pain reflected to the end of the penis not infrequently accompany the attack, but these symptoms are much more marked when the stone is in the ureter than when it is in the pelvis of the kidney.

5. *Transference, radiation, or reflection.*—Under these terms are described pains removed altogether from the site of the original exciting cause, though frequently associated with pain in that situation. The intimate connexions of the renal plexus with surrounding nerves permit of pain being reflected to the ends of various spinal nerves. The upper lumbar nerves are those along which these impressions more frequently travel, but instances are on record of a renal calculus exciting pains in the thigh, knee, hip, ankle, and foot, along branches of the anterior crural and great sciatic nerves of the same side. Thus in vol. xxii. of the Transactions of the Clinical Society, Dr. Steavenson and Mr. Butler-Smythe relate a case of renal calculus which owing to pains in the sole of the foot, hip, knee, and ankle, had been treated for sciatica until a renal tumour was discovered. The most familiar and striking instance of transference of pain is when pain is so concentrated in the testis as completely to divert attention from the kidney. Six years ago a youth was referred to me whose left testis had been kept carefully strapped for some weeks owing to pain and, it was thought, some enlargement of the epididymis. Having removed the strapping I found little abnormal about the organ, but I was attracted by the patient saying that at times the pain was so severe that he had to squeeze the testis in his hand to relieve the agony. He also admitted that the pain went up to his back and was brought on by heavy work. He had never suffered from gonorrhœa or had any injury to the testis. Following out my inquiries I came to the conclusion that he was suffering from a calculus in his left kidney, which I afterwards verified by operation, and by removing the stone I completely relieved him of his symptoms. In relating this case I wish at once to admit that I was assisted in the diagnosis by my recollection of a case related in vol. xv. of the Transactions of the Clinical Society in which the pain being concentrated in one testis Mr. A. Willett made a diagnosis of stone in the kidney that was afterwards proved to be correct by Mr. H. T. Butlin.

6. *Increased pain at night* is sometimes complained of but is by no means a constant accompaniment of renal calculus. In my experience it is only met with in association with very large or multiple stones. The explanations that have been offered of this occurrence are not to my mind satisfactory. One is that it is due to the passage of flatus in the colon over the pelvis of the kidney containing a stone, and another is that it is due to the concentration of urine and deposit of crystals at this time. A more reasonable hypothesis would be that, as the heart beats with less force at this time and so gives less impetus to the blood in distant channels, there is a tendency to congestion of the central organs and the congested tissues would be brought with their nerves into more forcible contact with the unyielding stone. If, however, as I have stated, this symptom is only met with in the cases of very large or multiple stones a simpler mechanical explanation is probably the correct one. In the recumbent position the heavy weight of the calculous kidney would press injuriously on the upper nerves of the lumbar plexus and in turning over to the opposite side its weight would tend to displace it, to drag on the nerves about its pedicle, and to press on the colon. I have frequently observed that patients with stone in one kidney are unable to sleep on, or even to turn on to, the opposite side without pain.

7. *Tenderness over the kidney* is a sign of value, especially when the stone is large or angular. It is best determined by placing the patient in the recumbent position, telling him to draw up his legs and to take deep inspirations. Bimanual manipulation is then employed, the fingers of one hand being deeply pressed into the loin in the angle between the last rib and the erector spinæ, whilst the other hand is pressed in beneath the ribs in front. During a deep inspiration the kidney can be caught between the hands and a sudden lancinating pain is sometimes caused if a stone be present, sufficiently acute to cause the patient to cry out. Should blood appear in the urine after such manipulation this would confirm the diagnosis. Sudden percussion of the loin, as suggested by Mr. Jordan Lloyd, I have not found to be of value. It is apt to frighten the patient and to deceive the surgeon.

8. *The pain is increased by jolting exercise.*—This is a valuable sign. A ride on an omnibus, in a light cart, or on certain of our railway lines may help materially to clear up a diagnosis. This sign assisted me greatly in arriving at a correct diagnosis in a somewhat remarkable case that I saw in the summer of 1893. A solicitor had been suffering for some years from a pain in one loin and pyuria. He had had the benefit of the advice of two or three of the most distinguished physicians and surgeons in London who had arrived at the conclusion that he was suffering from a tuberculous kidney. As the result of their advice he had sold his practice and was about to proceed to the high altitudes of California to combat the supposed tuberculous infection. Dr. G. Wilks advised him to consult me before taking this step. He accordingly journeyed to London one morning by a railway at that time not specially distinguished for smooth travelling and when he arrived at my house he was suffering severe pain as a consequence of the journey. His urine passed at my house besides containing a large quantity of pus was tinged with blood which was an unusual occurrence that I also attributed to the journey. The urine was sent to the late Dr. J. W. Washbourn for bacteriological examination and he failed to discover any sign of bacillus, either by staining and microscopic examination or by the injection of a guinea-pig. The patient's family history was free from any taint of consumption and pointed rather to longevity and gout. Upon this evidence I advised that he should have his kidney explored for stone. I had arranged to do this when I was seized with typhoid fever, so that the operation was performed by Sir Victor Horsley who removed a large stone and completely relieved the patient of his symptoms.

9. *The pain is said to vary with the composition of the calculus.*—According to Prout and Dickinson oxalate of lime causes the most acute pain with sharp radiating pains in various directions; uric acid calculus causes the least pain; whilst phosphatic stones give rise to a constant severe pain.

I do not think any great reliance can be placed upon these statements, as the amount and variety of pain depend much more upon the position and mobility of the stone than on its composition Phosphatic stones, however, being associated with a chronic pyelitis do, in my experience, give rise to a more constant ache than the other varieties

10 *The stamping test* —I have of late invented a new test which sometimes gives the most remarkable results The patient supports himself by resting one hand on some firm object, then is told to flex the thigh on the suspected side as high as possible The psoas muscle being thus strongly flexed, by its contracted belly presses the kidney forwards and outwards Next the patient brings the limb suddenly down, stamping the heel firmly on the ground The kidney in this way suddenly loses its muscular support and is caught, as it were, unawares, whilst the jar carried through the pelvis and spine is communicated to it A sudden acute pain is commonly caused by this manœuvre when a calculus is present In one case in which I employed this test it answered only too well, for the patient was immediately seized with acute renal colic which necessitated his being put to bed, where he lay for some hours in great agony It was evident that a stone had been displaced from a calyx and had fallen over the outlet of the pelvis whence it was removed by operation some days later

II HÆMATURIA

This symptom is associated with so many affections of the kidneys that taken by itself it is of little value in the diagnosis of calculus As a rule it follows the usual course of renal hæmorrhage, being equally mixed with the urine when passed and not interspersed with clots It may in certain cases be so slight as to give just a faint smoky tint or a "thin red line" at the high-water mark of the urine left in a chamber, whilst in others it may stain the urine a deep purple red colour or give it the dark opaque, muddy appearance of porter In rare cases it coagulates in the pelvis and ureter, giving rise to very characteristic clots These pelvic clots are somewhat triangular in outline and represent moulds of the pelvis and they sometimes carry, what is very characteristic, a long and very narrow tail moulded in the ureter More often these narrow mouse tail clots are separately detached and they may be six or eight inches in length, generally terminating in a bleached fibrinous end where the corpuscles have been washed out by the urine They are so narrow that they cannot be mistaken for clots moulded in the urethra In every case where clots are noticed they should be floated out in a basin of water and the water renewed time after time after pouring off the supernatant liquid till the clots lie in clear water In one case in which clotting in the pelvis was frequent I noticed a cavity in the majority of the clots passed, which was so constant in size and shape that I correctly diagnosed that the clot took the mould of a stone It must not be forgotten, however that a hollow in a clot may be caused by the projection of the papillary end of a pyramid or be moulded on a vascular papilloma of the pelvis

1 *Hæmaturia occasionally occurs in persons a little out of health without being the expression of any serious pathological condition* —"Some persons bleed from the nose, others from the kidney," was a favourite dictum of the late Sir William Gull, A little increase of hæmic pressure and feebly resisting capillaries might account for such transient disturbance in the condition of the urine, unaccompanied by other symptoms Among the more serious conditions giving rise to renal hæmaturia may be mentioned oxaluria, excess of uric acid, acute Bright's disease, granular contracted kidney, tuberculous pyelitis, papillomata of the pelvis, and new growths attacking the secreting structure

2 *The symptom of hæmaturia may be entirely absent* throughout the course of the case I could quote case after case in which this symptom had never been noticed, and curiously enough in such cases the stone is often proved to be both large and irregular But I will only allude to one brought before this society in the year 1896 by Dr Arthur T Davies The patient was a man, aged 23 years, who for two years had been liable to attacks of renal colic. There was a history of his father having passed a stone. "He had not noticed any alteration in the colour of his urine" A calculus composed of oxalate of lime and uric acid was extracted by Mr S Paget.

3 *Hæmaturia may be the only symptom* —The hæmaturia may be profuse and yet quite unassociated with pain. Such was the case in a patient who came under my care in Job Ward, Guy's Hospital, in 1899 He was 64 years of age He was thin and pale and had lost one and a half stones in weight during the previous 12 months His symptoms commenced ten months before admission when he first noticed blood in his urine This was at first observed only in the morning, but latterly had been continuously present He had suffered no pain in either loin or pain on micturition Some frequency of micturition had been experienced, chiefly at night, but it was not marked He did not strain to pass urine and there was no dribbling The blood was always evenly mixed with the urine and there were no clots It was of the colour of porter I discovered that the right kidney was enlarged, smooth, and painless He was repeatedly skiagraphed with negative results The urine contained no pus and he passed on an average 250 grains of urea in 24 hours Taking the age, pallor, wasting, painless tumour, and profuse hæmaturia, together with the negative result of the skiagraph, into consideration I came to the conclusion that the patient was suffering from cancer of the kidney, but I recommended an exploration and was prepared to remove the kidney if necessary or advisable On Nov 28th, 1899, I exposed the kidney by an incision through the loin and found it in a hæmato nephrotic state and filled with stones I drew off the liquid blood by means of a cannula and then excised the whole organ It contained six oxalate of lime stones, the largest of which weighed 200 grains The patient was discharged cured on Jan 5th, 1900 This case shows that profuse hæmaturia may be the only symptom present when the kidney is being destroyed by multiple calculi, for the patient was quite unconscious of any tumour in his abdomen until I discovered the enlarged kidney and was quite free from pain

4 *Hæmaturia due to calculus is almost invariably excited or increased by severe exercise* —This becomes more evident and characteristic if the patient is employed in a sedentary occupation Thus, a patient from whom I removed a calculus two years ago was in the habit of sitting in his office six days in the week and of taking a long country walk of many miles on Sunday On Monday morning after these walks he noticed that hæmaturia was regularly present. Riding in omnibuses or motor cars, taking long railway journeys, and such like, are extremely liable to excite hæmaturia if a renal calculus be present

5 *Hæmaturia following an attack of renal colic is very characteristic of calculus*, especially if the colic follow severe exercise It is, however, by no means regularly present after, or in association with, colic Colic frequently occurs without hæmaturia and hæmaturia without colic

6 *Hæmaturia dependent on calculus quickly subsides with rest in the horizontal position* —Being commonly caused by the wounding of vessels through the movement of a calculus within the kidney, or by the movement of the kidney itself when containing a stone, rest in bed contributes in this more than in other conditions to the rapid subsidence of the hæmorrhage

7 *Calculous hæmaturia may be so great as to cause death*, in such rare cases as those in which ulceration takes place into a large branch of the artery or vein It might have caused death in the old man whose case I related under paragraph 3 had not nephrectomy been performed, and it actually caused death in the case reported by Dr Steavenson before alluded to, on the seventh day after nephrectomy, from the ulceration caused by a stone that had been left at the operation extending into a large branch of the renal artery As a rule, the narrow outlet prevents this fatal accident Coagulation takes place in the ureter and backward pressure stays the hæmorrhage at the expense of the secreting structure

III —FREQUENT MICTURITION.

Frequent micturition may be met with in association with renal calculus but it is by no means constantly present, and it would appear to be due more often to conditions secondary to the stone than to the reflex effect of the calculus itself Thus if the stone excite pelvic mucus in quantity, hæmaturia, or pyuria, any one of these conditions may be the immediate cause of the irritable bladder Of these, pus in the urine is by far the most frequent concomitant of irritable bladder Urine loaded with deposits of phosphates or lithates may also be found in association with renal calculus and these deposits rather than the presence of the stone are the probable cause of the frequent micturition.

1. *Frequency in micturition may even give place to extreme tolerance*, as in a patient from whose left kidney I removed seven calculi in November, 1900. This patient, to whom I shall again allude in connexion with the diagnosis of multiple calculi, stated that owing to the pain of straining to pass urine which was severely felt in her left side she was in the habit of only passing it once in the 24 hours. Her urine was clear and free from blood and pus.

2. *Extreme irritability of the bladder and painful micturition felt in the perineum and at the end of the penis may be caused by a stone impacted in the ureter.*—So marked were these symptoms in a case published by my colleague, Mr. F. J. Steward, in vol. xxxiv. of the Transactions of the Clinical Society, that he was induced to open the bladder and was then able to feel the stone through the bladder wall lying in the ureter. A stone was lodged in the ureter, I have little doubt, in the case of a man who was under my care in Guy's Hospital last year suffering from similar symptoms. This man had suffered from repeated attacks of right renal colic and hæmaturia, but vesical irritability, with reflected pains along the perineum and penis, were also marked symptoms. The Roentgen rays failed to demonstrate the presence of a stone, but the pains were so clearly traceable to the right kidney that I explored it through the loin with a negative result. As so frequently happens, the operation entirely relieved him of his symptoms and he left the hospital quite free from pain. He returned three months later with a recurrence of the symptoms, and whilst I was contemplating an operation on his ureter he voided a small calculus with his urine and was thus completely relieved.

From these observations it will be deduced that frequent micturition, occurring independently of any abnormal urinary deposit and due to reflex irritation, bears a closer relation to the ureter than to the kidney, and when it is associated with renal calculus the stone will probably be found in the dilated upper part of the ureter or pelvis of the kidney and not imbedded in the secreting structure.

3. *Frequent micturition, sudden uncontrollable desire to pass urine, and incontinence* may be met with in children from the presence of a stone in the kidney. I have also seen reflex distension of the bladder brought about by the same cause acting through a different circle of nervous influence.

IV.—Retraction of the Testis.

Retraction of the testis may be occasionally noticed during an attack of pain in adults, but it is a much more obvious and important sign in children under the age of puberty. I have seen the testis drawn completely up into the inguinal canal in a boy during an attack of pain. More often it stops at the external abdominal ring. After puberty, as the testis increases in weight and the cremaster grows feebler with age the retraction of the testis becomes less obvious and consequently its importance as a symptom of less value.

V.—The Passage of Small Calculi or Gravel on Previous Occasions.

The passage of small calculi or gravel on previous occasions is perhaps the most important information that can be obtained from the former history of the patient. With such a record occurring in a patient the subject of hæmaturia and renal pain the presumption of a calculus retained in the kidney would be a sound and almost certain deduction. Such a history was obtained in the case of a woman from whose left kidney I removed seven faceted calculi in the year 1900. She had suffered from unilateral pain in the loin for five years and had passed at intervals two calculi as large as peas and several smaller ones. A history of having on two occasions passed a small calculus was present in another case that I operated upon last year.

VI.—The Grating of Multiple Calculi.

This is the only definite indication that we possess of the presence of multiple calculi, and for it to be obtained it is necessary that two at least shall be in contact. I have met with it on three occasions. The first occasion on which I had an opportunity of feeling the grating of stones in a kidney was in June, 1885, in the case of a patient who had suffered for 17 years from hæmaturia at intervals and who had a moveable right kidney that could readily be grasped and the stones contained within it grated one on another. This kidney when removed was a mere shell containing masses of stone that weighed 21 ounces. The second case in which I had an opportunity of testing this symptom was in a boy, aged 15 years, who was under the care of Dr. J. F. Goodhart in 1888. He referred his symptoms to the left side and when the neighbourhood of the last rib was pressed upon a grating sensation could be very distinctly felt. So evident was this grating that some were inclined to think that he might have fractured his last rib. Subsequently it was shown that he had numerous calculi in both kidneys, the left being a capsule filled with stones. The third case in which this symptom was noticed came under my care in Martha Ward on Nov. 5th, 1900. The patient was a married woman, aged 29 years. As I have already alluded to her case as presenting certain anomalies I will give it now in more detail. The patient, who gave a sound family history, had given birth to two children, aged five and three and a half years respectively. Pain commenced in her left loin five years before and whilst under treatment she passed a stone of the size of a pea and was relieved. The pain returned one and a half years later and then, whilst again under treatment, she passed one large stone and several smaller ones and was relieved. But the pain in the left side recurred and had been increasing very much during the last three weeks. The pain became acute when walking, but subsided on lying down. She had never noticed any blood or deposit in her urine. She had no difficulty in passing urine till three weeks previously, when she had to strain, and the pain in her left side when straining became so severe that she only passed her urine once in the 24 hours. She had shooting pains which were confined to the left side and the pain was most acute before passing urine. On manipulating her left kidney in the bi-manual method a definite grating could be felt. The urine was of clear straw colour with a specific gravity of 1024 and contained neither blood nor pus. The skiagram showed a dark shadow two inches by one and a half inches in diameter. I operated on Nov. 20th and removed seven faceted stones from the pelvis of the kidney. She was discharged cured on Dec. 14th, 1900.

VII.—Total Suppression of Urine.

When symptoms of total suppression of urine set in with intense pain in one loin shooting through to the front and down to the groin, constant futile attempts to pass urine, vomiting, headache, giddiness, and restlessness, the surgeon should at once take into consideration the probability of those symptoms being caused by a calculus obstructing the outlet of the only remaining kidney. I had for some years been advocating operation for the relief of such symptoms, as case after case was published ending fatally, before I had the opportunity of putting my views to a practical test. This happened at the end of October, 1885, when the patient already alluded to as having one kidney removed for immense calculi that could be grated together during life was seized with the symptoms of total suppression of urine. Through the promptitude of Mr. F. D. Atkins of Sutton, Surrey, I was able to get the patient brought up to London and on the fifth day of total suppression I cut down on the remaining kidney and removed a conical stone that was blocking the outlet of the pelvis, and so saved her life. The case was published in full, five years later, in the volume of the Transactions of the Royal Medical and Chirurgical Society for 1891, when she was still living. I am now, by the courtesy of Mr. E. Morgan Hearnden, who is a partner with Mr. Atkins, able to add a further interesting note of this patient. He writes on Feb. 6th, 1903: "I called to-day on Mrs. —— and found her in perfect health; in fact, she has never been ill since you operated on her." So I am in a position to state that 17 years and four months after an operation on a single kidney for total suppression of urine the patient is not only alive but in the enjoyment of good health.

VIII.—Shadow Photograph by the X Rays.

The demonstration of the presence of a stone in the kidney by means of the Roentgen rays has added much precision to the diagnosis in a considerable number of cases and with increasing experience the number of failures will probably be greatly lessened. At present, however, the shadow photograph, when negative, cannot be implicitly relied upon. When speaking of hæmaturia without pain I related the case of a man, aged 64 years, under my care in 1899, who was repeatedly skiagraphed with a negative result, so that I was led into error in diagnosing his case as one of cancer. Yet I found on exploration that this man's kidney contained six calculi which had practically destroyed the secreting structure Whether the blood with which the kidney was filled obscured the view I am unable to say, but certain it is that with ample opportunities and repeated attempts the Roentgen rays failed completely, though the calculi were oxalate of lime The kidney moves up and down in respiration to the extent of an inch or one and a half inches This fact and its distance from the surface are the causes, no doubt of the exaggeration in size so often shown in a skiagram In 1900 I operated for a second time on a boy whose kidney I had explored unsuccessfully *three years before After the exploration the symptoms* entirely subsided but returning led him again to seek advice three years later This time the Roentgen rays demonstrated a stone said to be one inch by one and a half inches, but when after a prolonged search I discovered it high up in a cavity communicating by a small aperture with the pelvis it proved to be only of about the size of the tip of the little finger The next case explored by the same radiographer for me in 1900 was that of a patient who had pain, hæmaturia and phosphatic urine The photograph taken was said to be a failure, but a stone was thought to be demonstrated on the screen and stated approximately to be from half an inch to an inch in diameter This proved to be an enormous phosphatic stone with five large branches measuring three and a half inches by two and a half Whether the radiographer was afraid to state correctly the enormous shadow seen or whether he photographed a small nucleus of a different chemical composition I am unable to say, but it shows that the determination of size by the Roentgen rays may be very misleading Better results no doubt would be obtained if the patients were instructed to hold their breath and so to fix the diaphragm during the time—only some 20 seconds—required for a skiagraph Of the three principal forms calculi oxalate of lime gives the darkest shadow, phosphatic calculi come next in point of clearness, whilst the uric acid are the least defined

Mr E W H Shenton radiographer to Guy's Hospital, states in a paper published in the Guy's Hospital Reports of last year that there had been 28 cases in which calculi demonstrated by the x rays had been found by the surgeon, eight cases in which the surgeon found calculi which the x rays had failed to show, and two cases in which the x rays had discovered calculi which the surgeon had failed to find by operation

IX.—Family History

I have placed this last because, though of some assistance, it is often very misleading For instance, in the case of the patient who had stones in both kidneys and had never shown the slightest tendency to tubercle the family history pointed strongly in that direction, for her mother, two sisters, and one brother died from consumption Her father had gout and died from congestion of the lungs so that we must presume, if heredity in her case had any influence, that she followed closely her father s line A history of gout or of the passage of gravel or calculi by some other members of the family especially if the person lives in a district where the water is hard, might give presumptive evidence in favour of stone On the other hand if the patient be of a delicate build, with a strong tuberculous history, and especially if, in addition, there be any evidence of former tuberculous infection about the glands in the neck, lupus of the skin, or ankylosis of a joint from a chronic inflammation in childhood, these indications of a tuberculous tendency must be given their due weight in considering the diagnosis.

X —Various Conditions liable to be Mistaken for Renal Calculus

I have gone so into detail in analysing the symptoms characteristic of stone in the kidney that I must condense my remarks as much as possible in speaking of the various conditions liable to be mistaken for renal calculus

1 *Tuberculous disease of the kidney* is perhaps more often mistaken for renal calculus than any other affection Hæmaturia, lumbar and reflected pains pyuria and frequent micturition may be present in either case Yet there are many distinguishing points

(*a*) The *hæmaturia* of tuberculous disease may be a striking feature in the early stages but it is then accompanied by little if any pain, whereas the hæmaturia of calculus is usually preceded by pain and markedly excited by exercise In the later stages of tuberculous disease the hæmaturia is often very slight and sometimes it is entirely absent

(*b*) The *pyuria* of tuberculous pyelitis is an early symptom and often *precedes for months any noticeable lumbar pain.* Thus a woman aged 43 years, who was under my care in September, 1900, had noticed the deposit of pus in her urine for three months before she suffered from pain in her right loin The pyuria of calculus is a late symptom and often entirely absent.

(*c*) The *pain* of tuberculous disease is a continuous dull aching pain not liable to the intense exacerbations or to the wide radiations of calculus It increases as the disease extends and the kidney becomes dilated into suppurating cavities *Taking these two symptoms* pain and pyuria together, I have for years formulated as an axiom for students that ' pain in excess of pus indicates stone, pus in excess of pain tuberculous pyelitis "

(*d*) Slight attacks of chilliness not amounting to rigors followed by a rise in temperature are frequent in the course of tuberculous kidney and the temperature at night is often above normal. Renal calculus seldom causes increased temperature

(*e*) Examination of the deposit of pus by staining and the microscope will occasionally discover the presence of the tubercle bacillus but it too often fails to be trustworthy as a negative test Dr H S French, now medical registrar at Guy s Hospital, when my dresser, after repeated examinations in a case under my care at last discovered a single bacillus, but this was quite characteristic and the diagnosis strengthened by this discovery was proved to be correct. The injection of guinea pig with the deposit is a more certain test. The late Dr Washbourn thus proved a case of tuberculous kidney for me when staining and the microscope had failed

(*f*, [illegible] is tl [illegible] roof [illegible] bladder I first discovered this in a case under the care of Dr (now Sir Samuel) Wilks in Clinical Ward in 1883 and in June 1884 I was able to demonstrate it to Dr (now Sir William) Broadbent in a case sent up by Dr Clarke of Huddersfield for joint consultation I have constantly taught the importance of this symptom during the last 20 years The ureter painful and thickened could be distinctly felt in a patient now in Martha Ward under my care whose tuburculous kidney I excised recently for a sinus following drainage of the kidney Another consequence of this condition is frequently met with It renders sexual connexion so painful as to be intolerable This was stated to be the case by the woman I have before alluded to as having pus in the urine before pain was established in the loin The same thickening of the ureter can occasionally be demonstrated by rectal examination in men

2 *Moveable kidneys* give rise to attacks of colic accompanied by nausea and vomiting similar to what are observed in the course of renal calculus and the condition is always one improved by rest , but the urine in these cases is almost invariably normal as regards its constituents though liable to vary greatly in quantity at times if the mobility has given rise to intermittent hydronephrosis The discovery of the abnormal mobility of the kidney helps to clear the diagnosis The aching kidneys described by Dr Matthews Duncan were for the most part kidneys unduly mobile, a condition which at the time when he wrote was but little understood

3 *Lithiasis and oxaluria* may occasion hæmaturia and severe pain in the loin, but the pain is not unilateral and the condition is one that can as a rule, be cured by freely flushing the kidneys by drinking large quantities of distilled water

4 *Acute Bright s disease and chronic granular or gouty kidney* may give rise to pain in the loin and hæmaturia but the persistence of the albumin when blood is absent the low specific gravity of the urine, and the usual indications of arterio-capillary fibrosis in the chronic disease will serve to point out the nature of the malady

5 *Villous growth in the pelvis of the kidney* is a rare affection which may give rise to very free hæmorrhage without pain or appreciable tumour Clots may indicate the source of the hæmorrhage and portions of growth washed away may show the nature of the disease

6 *Malignant growths of the kidney* first indicate their presence by free hæmorrhage and a rapidly growing tumour rather than by pain which is usually a late symptom dependent on pressure upon other organs

7 *Biliary colic and distended gall bladder* may be mistaken for right renal colic and enlarged kidney, but the colic

is hypochondriac and seldom penetrates much to the back. Examination of the urine and of the excreta will assist much in the diagnosis. The occurrence of jaundice and light-coloured stools and the discovery of gall-stones among the fæces would indicate the cause of the colic.

8. *Caries of the spine*, especially in children, may give rise to one-sided backache and radiating pains in front as a lumbar abscess is gradually forming, very similar to what is met with as the result of renal calculus. The pressure of the abscess on the renal vein may even cause hæmaturia, as I once saw very remarkably demonstrated some years ago. I was asked to go to Thetford to meet Dr. M. Beverley of Norwich in regard to the daughter of a medical man. She had spinal disease in the lower dorsal region and lately had been passing blood with her urine. I found a large lumbar abscess which I opened and drained. The blood entirely disappeared from the urine on the second day after the operation. A few months later I received a letter from the father to say that hæmaturia had again appeared. I wrote back: "Look out for an abscess on the other side of the spine." This was discovered and opened when the hæmaturia again and finally disappeared. I have seen this young lady as a plump well-developed woman showing little or no evidence of the serious illness which she passed through at the age of nine years.

9. *Colic of the appendix cæci* is another condition that I have known on more than one occasion to be confounded with right renal colic. The appendix varies so much in size and position—one was shown at a meeting of the Anatomical Society last year nine inches in length and directed upwards under the liver—that it is not always easy to ascertain whether the colic takes origin in the appendix or pelvis of the kidney and ureter. The ordinary cases of appendicitis are generally sufficiently indicated by the signs of localised peritonitis, tenderness, fulness, and partial obstruction, but it is not these cases that are most liable to be confused with renal colic. The cases to which I refer are those which give rise to little or no signs of inflammation but depend upon irregular spasmodic contractions of the muscular coats of the appendix in their endeavour to expel some fæcal contents, concretion, or foreign body. Only in January last I removed an appendix from a young man who had had constantly recurring attacks of pain every few weeks for a period of four years. On exposing the appendix no adhesions were found but it was noticed to have an enlarged extremity. When removed and split up a small haddock bone was found lodged in the cæcal end which had been the source of all his trouble. Cæcal colic is generally to be distinguished from renal colic by its lower position and by being confined to the front of the abdomen, whilst the tender appendix can usually be felt and rolled under the fingers.

From the criticism of the various symptoms of stone in the kidney and the illustrations which I have given it will be concluded that too much stress must never be given to any one symptom, since no one taken alone is either constant or trustworthy; but the surgeon must weigh in an even balance the various possibilities and gather from such signs and symptoms as may present themselves the probable cause of their origin.

FOREIGN UNIVERSITY INTELLIGENCE.—*Basle:* Dr. E. Wieland has been recognised as *privat-docent* of Children's Diseases.—*Bonn:* A very large ophthalmic clinic has just been erected. It will be opened for use at the beginning of the summer session.—*Breslau:* Dr. Karl Ludloff of Königsberg has been recognised as *privat-docent* of Surgery—*Copenhagen:* Dr. E. Faber has been recognised as *privat-docent* of Medicine.—*Greifswald:* Dr. Sophus Ruge has been recognised as *privat-docent* of Ophthalmology.—*Jurieff (Dorpat):* Dr. S. Miknoff of St. Petersburg has been appointed Professor Extraordinary of Midwifery and Gynæcology. Dr. R. Weinburg has been recognised as *privat-docent* of Anatomy, Dr. von Bönninghausen-Budberg as *privat-docent* of Surgery, and Dr. J. Meyer as *privat-docent* of Gynæcology.—*Lausanne:* Dr. G. Rossier, *privat-docent* of Midwifery, and Dr. M. Muret, *privat-docent* of Gynæcology, have been promoted to Extraordinary Professorships.—*Lund:* Dr. G. W. Tornqvist has been appointed *privat-docent* of Surgery.—*Marburg:* The rank of professor has been granted to Dr. W. von Lingelsheim, *privat-docent* of Hygiene.

The Lumleian Lectures

ON

INFECTIVE ENDOCARDITIS MAINLY IN ITS CLINICAL ASPECTS.

Delivered before the Royal College of Physicians of London on March 26th and 31st and April 2nd, 1903,

BY T. R. GLYNN, M.D., F.R.C.P. LOND.,
PROFESSOR OF MEDICINE IN UNIVERSITY COLLEGE, LIVERPOOL; CONSULTING PHYSICIAN TO THE LIVERPOOL ROYAL INFIRMARY.

LECTURE III.[1]

Delivered on April 2nd.

MR. PRESIDENT AND GENTLEMEN,—At the close of my last lecture I was considering the symptoms of infective endocarditis and was directing attention to the anomalous forms of the disease and to the fact that these may run a fatal course with little or no pyrexia.

Excessive perspiration was a marked symptom in many cases. Two men and one woman suffered so much with this symptom that the clothes were changed three or four times in the 24 hours.

Most of my patients were in a very blanched condition on admission, the anæmia being more marked than is usual in advanced disease of the heart with cachexia. In many instances, in patients with cardiac symptoms, the presence of profound anæmia excited a suspicion as to the nature of the disease. The pallor is, I think, usually most marked in the chronic cases and rapidly increases, so that the subjects sink into a state of profound cachexia, resembling that met with in pernicious anæmia, chronic phthisis, and cancerous affections. The examination of the blood carried out in several cases indicated that the anæmia was rapidly progressing. In one case, that of a female, the red blood corpuscles, soon after admission, equalled 3,000,000 per cubic millimetre; in about three weeks they were 2,060,000 and the hæmoglobin fell from 50 to 35 per cent. Her temperature was not excessive. There was an increase in the number of leucocytes in all cases except two. One or more joints became temporarily painful with or without swelling in eight cases.

Epistaxis was an early symptom in six cases and occasionally recurred, once with such severity that it contributed to the fatal termination. Petechiæ were present in ten cases, most commonly distributed on the trunk and legs; in one they were present on the face, in another on the upper extremities and eyelids, and in a third on the mucous membrane of the mouth. In one case only hæmorrhages were found on the retina, but the fundus of the eye was not systematically examined. A papular eruption was observed in one case and an erythematous eruption in another. In two cases there was superficial sloughing of the gums and throat.

Diarrhœa was present in 35 cases. In several it was an early symptom; in two cases it occurred three months before admission into the hospital and was the symptom for which relief was sought. Both these patients were intemperate and, besides the chronic valvular trouble, suffered from kidney disease. One died from uræmic coma preceded by asthma and the other from pneumonia. The intestines were in a catarrhal condition in many instances and hæmorrhagic patches were common. In one case small ulcers were present in the small intestine. In some cases the diarrhœa was severe and the evacuations were dysenteric, but in the majority of cases it was only slight—that is, it was limited to occasional loose discharges once or twice a day.

In about 15 cases there was vomiting, sometimes of an obstinate character. A case referred to by Dr. W. S. Kirkes emphasises the prominence occasionally assumed by the gastro intestinal symptoms. A man was admitted to St. Bartholomew's Hospital with the ordinary symptoms of rheumatism, and developing ulcerative endocarditis, who suffered from diarrhœa and vomiting to such an extent that Dr. G. Burrows, under whose care he was, suspected that he was the victim of an irritant poison administered by his friends. In all cases where vomiting was severe the stomach was found to be injected and occasionally superficial hæmorrhages and erosions were present. In one case a chronic ulcer was found in the lesser curvature. Vomiting and diarrhœa are sometimes present in the final stages of chronic heart disease and cannot, therefore, be regarded as more than suspicious symptoms. In 60 cases of advanced heart disease I found vomiting occur in 16·6 per cent. and diarrhœa in 10 per cent. In the infective form vomiting was noted in 25 per cent. and diarrhœa in 53 per cent.

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[1] Lectures I. and II. were published in THE LANCET of April 11th (p. 1007) and 18th (p. 1073), respectively.

Albuminuria and hæmaturia are common in infective endocarditis. In my cases the urine was albuminous in 29 instances, and 15 of these contained blood. The frequent occurrence of blood and albumin is sometimes the result of infarctions and sometimes of inflammatory changes. The fact that the average weight of the kidneys in the series of chronic endocarditis was 5·2 ounces and in the infective series 6·9 ounces indicates that parenchymatous changes were commoner in the latter. In my cases the condition of the kidney was frequently described as cyanotic or as large, firm, and congested. In eight there was distinct macroscopic evidence of nephritis.

With regard to the effects of renal infarction, the late Dr. W. M. Ord[2] and Dr. G. Schorstein[3] have each published a case of infective endocarditis with recent infarcts in the kidneys unattended with the presence of blood or albumin in the urine and in one of my patients a similar lesion occurred without any clinical phenomena.

Enlargement of the spleen, a valuable physical sign of the disease, was almost invariably present. In comparing the size of the spleen in 64 cases of simple disease of the valves and in the same number of cases of infective endocarditis, the average weight in the former proved to be 8·9 ounces, the minimum being 2 ounces and the maximum 26 ounces; while in the latter the average weight was 14 9 ounces, the minimum being 7 ounces and the maximum 55 ounces. The spleen in the chronic infective cases was usually larger than in the acute cases and often quite firm. In two of my patients a tumefaction of the spleen was one of the first symptoms to arrest attention. Several instances are recorded where the spleen in infective endocarditis has assumed enormous proportions—one a case under the care of Sir Lauder Brunton and another under the care of Dr. C J. Macalister, whose patient, a boy, aged 11 years, was admitted into the Royal Southern Hospital, Liverpool, suffering from what at the time was thought to be leucocythæmia. His spleen was greatly enlarged, extending to the pubes, and now and again he had febrile paroxysms lasting for a few days. Subsequently he was seized with severe rigors and vomiting, the temperature rose to 107° F., and a loud mitral murmur was noted. He was treated by sulphocarbolate of sodium and gradually recovered, but the mitral murmur remained He was seen four years later by Dr. Macalister and was then suffering from [illegible] red to be [illegible] curs in a [illegible] swelling, and the development of friction sounds over the organ, or when embolism of a kidney takes place and gives rise to pain and the appearance of blood in the urine, valuable indications of the nature of an endocarditis are afforded.

The endocardial murmurs in many of my cases were not due to the recent endocarditis, nor, indeed, were they modified by it, but were the consequence of the chronic lesions. For example, in the instance of the subject of abscess of the myocardium the stethoscopic signs were due to the mitral stenosis and the physical signs in the cases of malformation arose from the congenital defects and were in no way dependent upon the acute endocarditis. The development of excrescences in certain situations, as on the ventricular surface of the anterior mitral cusp and in the cavity of the left auricle, could not be attended with any stethoscopic signs; the murmurs noted in these conditions were due to the aortic and mitral regurgitation which preceded and determined the localisation of the infective process and in the absence of these chronic or congenital lesions the infective endocarditis could hardly have been recognised.

Although physical signs pointing to the development of destructive lesions of the heart are necessarily more commonly met with in ulcerative cases of endocarditis, some variation in the character of murmurs may occasionally be noted in the more chronic forms of the disease. In a lad, aged 17 years, when he was first examined a systolic murmur was limited to the apex. At the end of five weeks his temperature became normal and he went home. As he did not gain strength he returned to the hospital in six weeks when it was found that the heart had become more dilated, the apex beating five inches from the mesial line, instead of four, its former position. Double aortic murmurs were audible and the pulse had become characteristically jerking. After death no ulceration of the aortic cusps was discovered, but a crop of vegetations had developed on the valves which were otherwise healthy. The mycotic disease appeared to have originated on the sclerosed mitral cusps and subsequently to have invaded the aortic segments. Another youth, aged 19 years, when he entered the hospital had a very loud systolic murmur at the apex, audible in the back and all over the præcordium, replacing the first sound and accompanied by a thrill. Ten days afterwards a diastolic aortic murmur developed. At the necropsy the mitral orifice was found to be greatly widened, the left auricle and ventricle being much dilated; the majority of the chordæ tendineæ were ruptured and covered with warty growths and a few recent vegetations were found on the aortic valves. Here, as in the last case, the primary disease was probably seated at the mitral orifice and the aortic cusps became subsequently involved. In another lad a diastolic murmur developed in a similar manner. In a fourth patient a systolic murmur increased in intensity and many of the chordæ tendineæ were found to be destroyed. A female patient had a pre-systolic murmur on admission; in ten days it gave place to a musical systolic bruit. The lower edge of the anterior mitral cusp was found to be detached by ulceration. A sixth patient, admitted with the physical signs of free aortic regurgitation and with double murmurs over all areas, developed a musical systolic murmur. In one or two [illegible] became musical and [illegible] ured and everted. In [illegible] n the sounds occurred and no explanation of the phenomenon could be discovered. At the necropsy the left ventricle was enormously dilated. The most [illegible] modification of the heart sounds wa[illegible] murmur. In a case of acute [illegible] ch I attended with Dr. R. R. [illegible] f an affection of the heart was the development of an aortic systolic murmur; a[illegible] afterwards a diastolic murmur occurred and th[illegible] ith the ordinary chronic le[illegible] may, as the structures [illegible] suddenly undergo great alteration [illegible] is description are not in[illegible] of the aortic cusps. A [illegible] ed 30 years, who as the [illegible], before had suffered from [illegible] endocarditis and developed double aortic murmurs. Two months after his first visit the diastolic murmur had become so loud and musical that it annoyed him when he lay down at night. He was otherwise well. An old man was once brought to consult me by his wife who complained that there was something twanging in her husband's chest which kept her awake. Here, too, a simple diastolic murmur which I had heard on a previous occasion had become [illegible] of the heart sounds are so [illegible] that the temperature of [illegible] ould be taken for several days to exclude the possibility of the disease being present.

An alteration in the character of the pulse tracings was noted in several cases. In two cases the pulse wave assumed the characteristics of aortic obstruction and the aortic valves were found to be covered with fungating growths. Another showed a similar tracing when admitted and a like lesion was discovered at the necropsy.

In several of my patients there was evidence of rapid dilatation of the heart, but as this symptom is to be noted in progressive cardiac cachexia it is not, taken alone, of much value as a diagnostic sign in infective cases.

The great majority of my cases were of chronic type, the symptoms of the infective disorder persisting for several months. One case extended over eight months; the patient was in the hospital for seven months and his illness commenced some weeks before he entered. Four cases were under treatment for six months and these had been suffering from one week to two months before entering the hospital from diarrhœa, sweating, pain in the joints, or epistaxis, so that the disease was also in these cases of long duration. Five cases were under my care between four and five months, eight between two and three months, and the remainder were in the hospital under one month. In the majority of these cases there was a history of illness of some weeks' duration before admission.

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[2] THE LANCET, April 14th, 1833, p. 724.
[3] THE LANCET, March 20th, 1597, p. 811.

When the affection commences insidiously without initiatory rigors, as is frequently the case in the chronic forms, it is difficult to ascertain the date of the period of invasion and therefore to estimate the duration of the disease. In many cases, however, some idea of the duration of the disorder before coming under observation was acquired from the history of night sweats and diarrhœa. Rigors were an early symptom of infection in a few cases only. In two cases—the patient in one case being a plumber and in the other an intemperate man—the symptoms of invasion pointed to acute renal trouble, there being pain in the back and scanty dark-coloured urine which on examination was found to contain blood. In two other cases the first serious manifestation was an attack of syncope, in one five and in the other six weeks before admission. The earliest symptoms in 12 cases were diarrhœa and night sweats commencing from three weeks to four months before admission; all these patients were very pale, weak, and emaciated on entering the hospital. In 15 instances relief was sought for an aggravation of some previous manifestation of chronic disease of the heart or for the sudden development of such indications—namely, œdema of the lower extremities, palpitation, cough, and dyspnœa. Sometimes these symptoms were associated with night sweats or gastro-intestinal disturbance and renal trouble.

Cerebral embolism proved fatal in six cases and cerebral hæmorrhage in five. One patient died suddenly in convulsions and after death a large hæmorrhage was found in the head of the pancreas between it and the duodenum. Death was due to pneumonia in 18 instances and to acute pleurisy in two cases. In many of the cases of pneumonia the affected lung was in a state of grey hepatisation. Two patients died suddenly with symptoms resembling angina; in one the coronary arteries were blocked by calcareous deposit, while in the other, who screamed with pain in his chest just before death, the coronary arteries were closed by recent vegetations. Five patients died suddenly; in these the aortic valves were seriously involved. Death in 14 of my cases appeared to be due to the cachectic condition to which the patients were reduced, brought about not only by the septicæmia but also by the physical trouble and degeneration of organs associated with advanced heart disease. Five died with uræmic symptoms. Dr. W. Hale White has referred to uræmia as a frequent cause of death in infective endocarditis and has described a case of this disease associated with kidney trouble where the temperature was normal for three or four weeks, the renal disease, as in several patients under my care, masking the heart affection.

The difficulties attending the diagnosis of endocarditis are sometimes insuperable, for trustworthy clinical indications may be wanting I have already referred to the anomalous character of the temperature in certain cases, more particularly in those of the chronic class, and to the occasional absence of fever even in subjects of the acute type of the disease M. Claude[4] published two cases of malignant endocarditis without pyrexia. The patient in one of these cases entered the hospital with dyspnœa, albuminuria, and hypothermia The râles from bronchitis prevented satisfactory auscultation of the heart sounds. Death occurred from coma. The necropsy revealed ulcerative and vegetative lesions of the aortic valves. In this case and in the other presenting the same peculiarity streptococci were found in the vegetations and at the base of the ulcerations. In a patient under the care of M. Petit[5] suffering from ulcerative endocarditis there was also an absence of pyrexia and of stethoscopic signs. Dr. Hale White refers to the influence which disease of the kidneys exerts on the symptoms of infective endocarditis, the kidney trouble overshadowing the heart trouble, and he gives the history of a case of infective heart disease with slight pyrexia on admission and the absence of fever for three or four weeks subsequently, the urine all the while being albuminous, sanguineous, and of low specific gravity. In M. Petit's case just referred to it is stated that the kidneys were affected and that the patient died from dropsy and exhaustion. Dr. Leslie Phillips[6] has published two cases of infective endocarditis with Bright's disease where the temperature did not rise above normal during the last days of life. Dr. A. E. Sansom[7] notices the absence of pyrexia in an otherwise typical example of infective endocarditis. Kirchensteiner[8] relates a case of pneumococcic endocarditis where pyrexia was absent until a few days before death. Sometimes, and especially in acute cases, the recognition of the disease is rendered impracticable by the non-existence of the physical signs of endocarditis. The late Dr. J. Curnow[9] published the case of a patient in whom the physical signs of heart disease were absent and who appeared to be suffering from pyæmia or severe typhoid fever. The late Dr. Julius Pollock[10] described a case of ulcerative endocarditis where there was neither enlargement of the heart nor murmurs. Mr. Laurence Humphry[11] gives particulars of a similar case. Examples of infective endocarditis with an absence of evidences of heart trouble have also been met with by Lancereaux, Harlitz, Sanguine, Purser, and others. The occasional absence of endocardial murmurs in infective endocarditis is to a large extent due to the fact that the edges of the curtains of the valves are not invariably involved.

When the valves of the heart are involved in a primary or secondary affection, originating in pneumonia, typhoid fever, or urethritis, or in some local or general condition capable of causing infection, the development of a murmur or other sign of endocardial trouble is of great diagnostic value, and the significance of the physical sign is increased if it is attended by a renewal, or alteration in the type, of the pyrexia. At the same time it must be borne in mind that disorders capable of exciting malignant endocarditis may also give rise to the affection in its simple form and further that functional murmurs often occur during the course of an exhausting febrile malady. I have notes of a case of pneumonia in a woman where the resolution was unusually delayed and where a murmur declared itself over the mitral area during the third week, when the temperature was hectic. For a short time there was little improvement in the local or general conditions, but convalescence was slowly established and when she left the hospital the heart sounds were almost normal.

In the complex conditions due to acute general infection with secondary manifestations in several organs, endocarditis, if present, may fail to develop to an extent capable of recognition. The following case of acute pneumococcic infection with endocarditis and other lesions, kindly reported to me by Dr. W. Carter, illustrates the conditions referred to. A man, aged 40 years, entered the Royal Southern Hospital, Liverpool, on Dec. 1st, 1902. His illness had commenced three days before with shivering, frequent cough, and high fever, and he presented the ordinary features of pneumonia. A few days after admission he became hemiplegic, then unconscious, and finally died. No endocardial murmurs were present at any time. At the necropsy there was evidence of acute meningitis. The left lower lobe of the lung was in a state of red hepatisation. On the left posterior aortic cusp was a tuft of vegetations of about the size of a pea, soft, friable, and easily detached. The spleen was enlarged and the kidneys were congested. Pneumococci were found in the pus from the meninges, in the consolidated lung, and in the vegetations.

In less acute cases of septicæmia associated with pneumonia the type of the pyrexia may change on the advent of the endocarditis or a murmur may be noted. A man about 30 years of age, the victim of chronic bronchitis and emphysema, a patient of Mr. A. E. Davis of Liverpool, was attacked with pneumonia. On the tenth day there was some indication of a crisis, but the temperature soon became high again and the pulse more rapid. A soft systolic murmur developed at the apex and a day or two afterwards he became hemiplegic and aphasic, gradually sank into a comatose state, and died.

In the absence of positive symptoms the diagnosis depends on the ability to exclude all affections other than acute endocarditis likely to cause pyrexia, a method of investigation calculated at times to be attended with failure, as the following cases demonstrate A man, aged 51 years, of intemperate habits, was admitted into the hospital under my care in 1901 with albuminuria, irregular pyrexia, and evidence of aortic and mitral disease The spleen was felt below the costal arch There were emphysema and expectoration of mucus, he died in ten days At the necropsy the aorta was atheromatous and its valves were incompetent, but there was no recent endocarditis The pyrexia was due to the presence of miliary tubercles in the lungs Another patient, a woman, aged 28 years, was admitted in 1898 She was intemperate and had suffered from rheumatism three years before, she had lately complained of weakness, shortness of breath, and palpitation. On admission her temperature was 104° F, she was very anæmic, cyanosed, slightly jaundiced, and prostrate, there was evidence of slight alcoholic neuritis, the heart was dilated and hypertrophied, with a systolic murmur at the apex the spleen was enlarged, and the urine was albuminous The temperature remained high, between 105° and 106°, till the day before her death, and a petechial eruption appeared on the legs At the necropsy the pericardium was found to be adherent, the heart enlarged, and its muscle pale and soft, the mitral orifice was dilated but the cusps were normal The spleen weighed 20 ounces and was very friable, the kidneys were enlarged and mottled, the lungs intestines, and other organs were in a normal condition Streptococci were found in the spleen by cultivation The case was one of septicæmia developed in an intemperate, unhealthy woman, but no primary focus of infection was discovered, and the heart, though unsound, was in no way involved in the septic process A man, aged 39 years, entered the hospital with pains in the joints, evidence of heart disease, slight irregular pyrexia diarrhœa, and sanguineous urine Streptococci were found in the blood, death occurred in three weeks At the necropsy there was simple thickening of the mitral cusps but no recent endocarditis He also died from septicæmia but the heart was not involved

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[4] Progrès Médical, December, 1901, p. 483.

[5] Ibid., Dec. 23rd, 1899.

[6] THE LANCET, August 4th, 1883, p. 185.

[7] Brit. Med Jour., vol i., 1884, p. 463.

[8] Munchener Medicinische Wochenschrift, August 3rd, 1897.

[9] THE LANCET, April 24th, 1886, p. 785.

[10] THE LANCET, August 20th, 1887, p. 369.

[11] THE LANCET, Jan. 28th, 1888, p. 176.

When infective endocarditis develops in apparently healthy individuals the manifestations of general infection dominate over the symptoms of endocarditis, indeed the physical signs of disease of the valves may be absent for a few days and the difficulties attending diagnosis commensurately increased This was the course of events in a case I attended with the late Dr R Pugh in Liverpool some years ago A girl was suddenly attacked with high fever and delirium, nothing was found pointing to disease of the heart or lungs, and it was not until a week after the illness commenced that evidence of endocardial mischief appeared in a mitral systolic murmur and was followed by other symptoi

Wher a complication of as in many of my cases, the symptoms of septicæmia are often ill pronounced and masked by the troubles originating in the embarrassed circulation Occasionally the affection even in apparently healthy persons, commences in an insidious manner The following is a good example of this mode of invasion Many years ago a young surgeon and valued friend presented himself to me for examination in connexion with a proposal for life insurance A mitral systolic murmur was present with slight displacement of the heart's apex There was no history of rheumatism For about six years subsequently he was actively engaged in private and hospital practice and at the end of that time he called to consult me about his health He had he said been feeling out of sorts for about two months, had lost his energy and appetite and had suffered from sleeplessness and occasional night sweats His idea was that he was a victim of neurasthenia and with the view of trying what exercise would do for him he had been away for a fortnight on his bicycle He was anæmic his pulse was rapid and his temperature was 100° F, the apex beat of the heart was more displaced than on my former examination and the mitral murmur was more marked With considerable difficulty he was persuaded to stay at home and to give up work. Our impression as to the nature of his case became gradually confirmed as the pyrexia continued and the exhaustion increased For two or three weeks he struggled against his weakness spending his days on the sofa and sitting up to his meals The fever pursued an irregular and intermittent course, usually falling to 99° in the morning but rising to 102° later in the day In about six weeks absolute rest in bed became imperative Aortic murmurs developed, the spleen became enlarged, vomiting occurred occasionally, albumin appeared in the urine, certain joints became painful, petechiæ showed themselves, and an acute pleurisy developed Asthmatic attacks accompanied by palpitation and pain over the heart, disturbed his nights, his appetite failed entirely, and he sank into a comatose state and died after an illness of three or four months' duration

In my first lecture I referred to a case of infective endocarditis following chlorosis where also the infection developed in an insidious manner and I believe that the disease not infrequently commences in this obscure way, its mode of invasion being in these instances utterly unlike that described in text books as characterised by rigors, high fever, and delirium

I have referred to a case of infective endocarditis which was mistaken for typhoid fever In another patient who was sent to the hospital as suffering from enteric fever, the fever was of continued type, so that the resemblance to typhoid fever was greater than in the former patient where the pyrexia followed an intermittent course The state of the heart the great enlargement of the spleen, the hæmaturia the presence of staphylococci in the blood, and the negative result of the serum reaction, all served to indicate the nature of the disease

Though the serum reaction is calculated to be of great assistance in cases of this description it may sometimes be misleading A case of great interest is related by Dr W R. Matthews [12] of infective endocarditis with ulceration of the mitral valve where the serum reaction gave a positive result and where the appearance of the intestines did not point to a previous attack of typhoid fever Dr Hale White and Mr W O O Pakes have also met with a case of malignant endocarditis giving the serum reaction and cases are recorded where this reaction has been positive in septicæmia and acute tuberculosis [13]

I am indebted to Dr Peter Davidson for the history of a patient of his where the clinical evidence was unusually conflicting A man had rheumatism at the age of 21 years, in 1900 12 years afterwards, his heart was dilated and a slight systolic murmur was noted over the aortic area Two years subsequently he was attacked with chills and fever, staphylococci were found in the blood, and the serum reaction was negative In four days the temperature became normal and remained so for three days, the pyrexia then returned, and on the fourteenth day he developed typhoid spots The serum reaction was now positive, the spleen became enlarged, pericarditis and pneumonia set in and the patient did

I have already referred to a case of acute tuberculosis associated with disease of the heart where an error of diagnosis occurred There is a close resemblance between chronic tuberculous disease of the lungs and chronic forms of infective endocarditis In both the onset may be insidious and the symptoms similar—namely, anæmia, wasting debility, slight pyrexia, and pulmonary troubles Careful phys blood and sp be formed of the valves accompanies resultant symptoms necessarily conform to the chronic type of infective endocarditis Fortunately, in such complicated cases examinations of the apices of the lungs and sputum usually furnish reliable indications of the nature of the disease and disclose the origin of the pyrexia. In one of my cases chronic tuberculous disease of the lungs was associated with infective endocarditis The disease of the valves of the heart was due to streptococcic infection and not to infection by the tubercle bacillus. I say nothing of tuberculous endocarditis an affection that has excited much attention during the last few years on the Continent for I have met with no examples of the disorder and have searched the records of the post mortem examinations held at the Liverpool Royal Infirmary without finding a single instance of it.

The protracted forms of infective endocarditis present a close resemblance to pernicious anæmia and the likeness is the closer since streptococci may be found in the blood of the subject of either disease In 1887 a man aged 50 years was under my care suffering from pernicious anæmia. His temperature was hectic in character, the heart was greatly dilated, with loud systolic murmurs at all areas, and there were marked gastro-intestinal troubles and great enlargement of the spleen, the case perhaps being one of splenic rather than of pernicious anæmia. A correct diagnosis was arrived at chiefly on the evidence furnished by the history of this illness, the gradual development of the symptoms of heart trouble, and of pyrexia.

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[12] Brit Med Jour Jan 21th, 1899

[13] Ibid 1902 p 715.

Cardiac thrombosis and embolism associated with chronic disease of the heart are not usually attended with pyrexia. I have, however, met with two instances where these conditions were associated with fever—in one a softening thrombus was situated over a suppurative focus in the myocardium. The symptoms presented by the patient resembled those of infective endocarditis. In the other case a softening thrombus was found on a sclerosed mitral cusp and here again the symptoms were almost identical with those of malignant endocarditis.

With regard to the cultivation of bacteria from the blood during life my own experience coincides with that of others who have occasionally obtained a negative result even when several cubic centimetres of blood have been removed from a vein, especially in cases of a chronic character. The occurrence of leucocytosis may help to distinguish infective endocarditis from typhoid fever. I have, however, as I have before stated, met with two cases of infective heart disease without leucocytosis.

Recovery in infective endocarditis is a rare event and the more acute the disease the less is the probability of a favourable termination. Moritz considers that the disease proves fatal in 80 per cent. of the cases and these figures appear to me rather to underrate the mortality. The evidence that the affection may occasionally end favourably is of two kinds, pathological and clinical. I have already referred to the former and have described anatomical conditions indicative of a healing process, usually partial, but occasionally complete. The clinical evidence alone remains to be considered. I have alluded to the case of a boy who entered the hospital with a diffuse aneurysm of the forearm and symptoms of infective endocarditis and who recovered and died 19 years afterwards from chronic disease of the heart. I will now refer very briefly to one or two other cases where recovery has taken place. In one, a man, aged 20 years, was admitted into the hospital under my care on Jan. 1st, 1900, with aortic and mitral regurgitation. He had suffered from rheumatism at the age of 19 years and had been in the hospital on a former occasion with symptoms of rheumatism and heart disease. Three weeks before entering the hospital he commenced to suffer from breathlessness, palpitation, weakness, night sweats, and œdema of the feet and ankles. He was very anæmic; his temperature for 18 days was 101° or 100° F. at night and about 99° in the morning. There was no evidence of rheumatism or of any lung trouble to account for the pyrexia. The area of splenic dulness measured four inches; the urine was free from albumin but there was a tendency to diarrhœa. Cultures of blood taken from a vein showed staphylococcus albus and staphylococcus aureus. Three weeks after admission his temperature became normal and he left the hospital early in March—that is, two months from the time of his admission. The following case appeared to be an infective endocarditis following parturition and ending favourably. A woman, aged 28 years, was confined of her first child two months before admission to the hospital. Eight days after confinement she had a rigor and rigors were frequently repeated during the following weeks. On admission she was thin and blanched and wet with perspiration; her expression was dull and heavy, her mouth was open, and her tongue was dry; the left ankle was swollen and the skin in its neighbourhood was œdematous; the pulse was small (116) and the area of cardiac dulness was increased. The apex beat was four and three-quarter inches from the mesial line, with faint systolic murmur in the mitral area. The splenic dulness was increased; the urine was free from albumin. Dr. Grimsdale, obstetric surgeon to the hospital, found nothing abnormal in the pelvic organs. The rigors were frequently repeated during the first five days of her sojourn in the hospital. The sweats were most profuse, so that her clothes were changed half a dozen times during the 24 hours. Her temperature was of a very irregular type, for the first week being hectic in character, touching 101° F. with a rigor, and then falling to normal. During the second week the pyrexia followed a more continued type, seldom falling to 99°, and with a rigor reaching 104°. During the second week there was increase in the size of the heart and the mitral murmur became more marked. Staphylococci were found in the blood taken from a vein. There was much nausea, the appetite failed completely, and there was much pain of a wandering character in the joints. At the end of six weeks she commenced to improve. The inflammatory trouble in the left ankle-joint, which at one time appeared likely to end in suppuration, receded, and the temperature became normal two months after admission. She left the hospital three weeks later, and at that time the apex beat of the heart was three and a quarter inches from the mesial line, and the first sound was clear everywhere. A man, aged 51 years, was admitted under my care in 1876 with symptoms of aortic regurgitation. He had suffered from rheumatism at the age of 30 years. He complained of breathlessness, palpitation, and weakness. There was no œdema of the extremities. The pyrexia was of an irregular type, sometimes highest in the evening and at other times in the morning, ranging between 99° and 102° F.; the urine was albuminous. On one occasion he had a sudden sharp pain over the spleen which became enlarged. There was diarrhœa, the bowels acting five or six times in the 24 hours. In about three weeks his temperature became normal, the diarrhœa ceased, and the albumin disappeared from the urine. He soon afterwards left the hospital, the symptoms of chronic heart trouble still persisting. A young woman, aged 22 years, was admitted on Sept. 5th, 1887; she was under-sized and anæmic, with emphysematous chest and varicose veins on the legs. The red corpuscles were 2,000,000 per cubic millimetre and the hæmoglobin was 50 per cent. She had suffered from three attacks of rheumatism and lately had menorrhagia. The present illness commenced with epistaxis four days before admission. The heart was enlarged and there were mitral and aortic murmurs. The spleen was also much enlarged, its area of dulness measuring six inches. She suffered from diarrhœa with sanguineous dysenteric motions, epistaxis, petechial hæmorrhages on the skin, and albuminuria. Her temperature was of a hectic type, generally being 103° F. in the evening. She gradually improved under treatment and was convalescent in six weeks. A man, aged 28 years, entered the hospital with pain and swelling of the ankles, chronic bronchitis, and emphysema. He had had one or two rigors a month before admission. For about a fortnight his temperature was very high and of a hectic type, usually reaching 104°, even 105°, and once 107° F. in the evening and falling to normal or subnormal in the morning. Staphylococcus albus was found in the blood on two occasions. The heart was enlarged and had a mitral systolic murmur at the apex. The splenic dulness was increased. There was no diarrhœa or albuminuria. At the end of three weeks the pyrexia began to diminish. He gradually improved and left the hospital convalescent at the end of two months. I am indebted to Mr. A. M. Watkins of Whitchurch, Salop, for notes of a case apparently of infective endocarditis terminating favourably. A girl while suffering from broncho-pneumonia exhibited signs of mitral regurgitation. At the same period there were high fever, rigors, and sweating accompanied with incessant vomiting. These symptoms continued for many weeks; dropsy developed and two months after the onset of the illness several severe attacks of angina occurred. It was many weeks before the temperature became normal and six months before convalescence was established. She was treated by large doses of quinine, from 20 to 40 grains per day, the drug for many days being administered by the rectum owing to the incessant vomiting. Dr. Nathan Raw also has obliged me with particulars of a case of recovery in which the patient was a girl, aged 10 years, who had suffered from rheumatism three years before and had never felt well since. She entered the Mill-road Hospital at Liverpool on Feb. 3rd, 1902, complaining of severe pain under the left breast. The heart was dilated and there were double mitral murmurs; the pulse was 120; the trunk and limbs were covered with petechiæ and the respirations were 24. There were cough and expectoration. The urine was free from albumin. The temperature oscillated between 101° and 104° or 103° F. and remained high for 11 days; at the end of a fortnight it became normal and the patient rapidly recovered. Streptococci were found in the blood in great numbers. She was treated by digitalis and strychnine.

I will not refer to the cases of recovery recorded in the journals; they are comparatively few in number and the treatment adopted has been very various. Occasionally the subjects of the disease recover to a certain extent and subsequently relapse. Three of my patients improved for a time and left the hospital, only to return in a worse condition. This was the case with one patient who suffered from congenital disease of the heart. He was first admitted with irregular pyrexia and diarrhœa and loud systolic murmurs across the sternum—double murmurs, loudest over the pulmonary area. After a month his temperature became normal and his general condition improved, so that he was able to go home. He returned in two months, the former symptoms having become aggravated. He lingered for seven months. Another patient entered the hospital for pains in the joints which started, he said, after a rigor seven weeks before. He was very anæmic and he suffered from sweats, vomiting, and slight irregular pyrexia. In about a month his temperature became normal, not rising above 99° F., his general condition had improved, and he left the hospital. He remained fairly well for a time, only suffering from symptoms due to the chronic affection of the valves, but in about seven weeks he returned. His temperature was now distinctly hectic, a diastolic murmur had developed, the pulse tracings had altered in character, and all the former symptoms had become accentuated. I am indebted to Dr. T. Bushby for what appears to be a relapsing case of infective endocarditis. The patient, a youth, aged 19 years, entered the David Lewis Northern Hospital in 1898 with evidence of aortic and mitral regurgitation after rheumatism eight years previously. The temperature was high for several days, fell to normal at the end of a week, then speedily rose again to 103° F., and a day or two later to 105°. It remained high for another week and fell again, only to rise at a subsequent period. There were several exacerbations of this description. In three months he was able to leave the hospital. During his illness the spleen became enlarged, its area of dulness measuring four and a half inches. On one occasion it increased in size and became the seat of pain. No organisms were found in the blood. The urine was for a time albuminous. He remained out of the hospital a month and then returned with pyrexia of a more regular type. On this occasion he suffered from vomiting and the spleen remained enlarged. The temperature gradually fell, but it was ten weeks before it became normal and 17 weeks before he was able to leave the hospital. He remained well for two years, when he again broke down, attributing his illness to losing a situation and want of food. At the end of this period he again came under Dr. Bushby's care with symptoms similar to those presented on former occasions. The pyrexia this time continued for four months and again yielded to treatment.

Sir Douglas Powell in the Lumleian Lectures of 1898 carefully considered the circumstances that govern the treatment of infective endocarditis, directing attention to the necessity of observing certain prophylactic precautions during convalescence in rheumatic endocarditis and reviewing the therapeutic measures likely to be of some use in the disease With regard to prophylaxis he points out that while infective endocarditis "is frequently started from infection through septic surfaces or centres, in other and a numerous class of cases the disease arises without any intermediate illness from sewer gas emanations, but in the latter cases in my experience it has almost always happened that previous valve lesions from former endocarditis have existed." It is evident, therefore, as Sir Douglas Powell points out, that patients convalescent from rheumatic fever or with simple valvular affections should be protected from possible exposure to sewer gas emanations. Dr. Peter Davidson supplies me with a case in point. He had for some years under his care a man with congenital heart disease. With care and appropriate treatment he was able to lead an active life. In the discharge of his duties, however, he was on one occasion compelled to spend some days in the examination of house property; he was fatigued and possibly, Dr. Davidson thinks, exposed to deleterious influences in insanitary dwellings. While occupied in this way he became ill; febrile symptoms developed, streptococci were found in the blood, and he died from infective endocarditis. The same conditions probably occasioned the genesis of the disease in a patient whom I saw with Dr. J. O'Hagan of Liverpool in 1901. The patient, a young man, just convalescent from an attack of rheumatism, went on a business journey to America and there spent much time in travelling. During his expedition he became very ill and developed right hemiplegia and aphasia; on his arrival home he presented the symptoms of infective endocarditis and died from pneumonia.

No specific remedy has yet been found for infective endocarditis. At one time there was reason to expect that such an agent had been discovered in anti-streptococcic serum, but the success attending its use has not been as great as was anticipated. Only a few days ago Dr. Cyril Ogle,[14] gave a comprehensive review of the therapeutic value of this serum, together with statistical information of the successes and failures experienced in its use, from 1896 to 1901 inclusive. Sir Douglas Powell in his Lumleian Lectures of 1898, to which I have already referred, also gave a tabulated statement of the results of treatment by anti-streptococcic serum up to the date of his lecture. In Sir Douglas Powell's table the successes amount to 25 per cent. and in Dr. Ogle's table to 31·5 per cent. It is evident that the anti-streptococcic serum is only likely to be useful in cases of infective endocarditis from streptococcic infection, and that as the serum prepared from one variety of streptococci is destructive of that particular variety only it is desirable to use a polyvalent serum. Even when the serum has been used in appropriate cases the results obtained are not very encouraging. I find in Dr. Ogle's tables that streptococci only were found in the blood in seven cases and that in but two of these was the serum treatment successful. It may be, as Dr. Ogle is inclined to believe, that the injections were not commenced soon enough or that the dose of serum was too small. I am indebted to Dr. Nathan Raw for particulars of his experience in the use of anti-streptococcic serum in the Mill-road Hospital, Liverpool. He used it in five cases of what he considered to be streptococcic infection where the heart was implicated; from 50 to 200 cubic centimetres of the serum were injected in each of these patients without any beneficial results. In one the infective disease followed many attacks of rheumatism; in another erysipelas; in two it succeeded parturition and in the fifth was associated with phthisis. I have obtained no information of an encouraging nature from any other of the large hospitals in Liverpool. I have used the serum without success three times—once in hospital practice, where streptococci were found in the blood, and twice in private practice, where no micro-organisms were discovered on examination. In the case of the patient under the care of Dr J. Hill Abram in my absence the use of the anti-streptococcic serum was attended with the disappearance of the streptococci from the blood. 100 cubic centimetres were injected in ten days, streptococci and staphylococci being present in the blood. After death staphylococci alone were found in the vegetations and spleen.

The most recent remedies, Creda's collodial silver salts and nuclein, do not appear so far to have given very satisfactory results, though recovery in malignant endocarditis is reported to have followed the use of the silver salt on the continent. Nuclein was used together with anti-streptococcic serum by Dr. Hill Abram in his case of infective endocarditis following pneumonia without any benefit.

It is possible that the future may bring improved methods of serum treatment; meanwhile the physician must not adopt [illegible] strength of the patient by the aid of tonics and stimulants, diminish as far as is possible the multiplication of bacteria in the organism by the administration of antiseptics, and strengthen and regulate the action of the heart by cardiac tonics.

In conclusion, I thank you for your kind attention and beg to assure the President and Censors of this College that I am deeply sensible of the honour they conferred upon me in inviting me to give the Lumleian Lectures. I must also thank many friends who have lent me much valuable material.

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[14] THE LANCET, March 14th, 1903, p. 720

THE DATE OF THE EXAMINATIONS FOR THE ENTRANCE SCHOLARSHIPS AT THE LONDON HOSPITALS.—The Jewish New Year will fall on Tuesday and Wednesday, Sept. 22nd and 23rd next. Judging from past years these days may be chosen for the examination for entrance scholarships at the various London medical schools. It has been suggested to us by a correspondent that the deans of the various schools might well avoid these days as well as all Saturdays in making the arrangements for the examinations, otherwise Jewish candidates are disqualified.

An Address

ON

DIETETICS.

Delivered at the Opening of a Discussion at the West Kent Medico-Chirurgical Society on April 3rd, 1903,

BY ROBERT HUTCHISON, M.D., M.R.C.P. EDIN., M.R.C.P. LOND.,

ASSISTANT PHYSICIAN TO THE LONDON HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET, W.C.

MR. PRESIDENT AND GENTLEMEN,—I wish in the first place to thank you for your kindness in inviting me to open this discussion. At the same time I feel that you have laid upon me a considerable responsibility, for the subject of dietetics is a wide one and to deal with it adequately in the time at my disposal is no easy matter. My task, however, is lightened by your foresight in limiting the scope of the discussion to the *principles* of dietetics, which, I take it, sets me free from the necessity of entering into details and permits a more general view of the subject as a whole. I think, if I may say so, that the society is to be congratulated upon the selection of this theme for debate. Nothing is more striking at the present day than the interest shown by patients and the public in everything that relates to food and diet, whilst the comparative apathy displayed by our profession in such matters is equally noteworthy. Nor has this escaped the notice of the more intelligent of our lay critics. This, for instance, is what a shrewd old lady[1] whose opinions command a large measure of public attention has to say of us in a recent book: "The study of food in relation to health is a branch of medical science as yet in its infancy. ...... Has not the doctor been taught to study drugs for the cure of disease rather than food as the basis of health? He never gives diet much consideration except in the case of over-eating in severe illness. ...... I wish to warn people that if they consult their doctor no diet will be tried. The doctors must be educated by the public." If we are honest with ourselves I think we must admit that those strictures contain a certain amount of truth. In our defence, however, let me hasten to say this, that one main reason why we medical men are often less dogmatic than lay people in matters of diet is that we know better than anyone the truth of the old adage that "one man's meat is another man's poison." It is the foolish layman who is apt to rush in where the angels of healing fear to tread. This factor of personal idiosyncrasy, indeed, is the great stumbling-block in the way of dietetic progress. We can never be quite certain how any given individual will react to a particular kind of food. I have a medical friend, for instance, who is always made violently ill if he eats the smallest particle of plaice, though all other sorts of fish are innocuous to him, and I know another distinguished physician who can eat beef but dare not touch mutton, and everyone here must have met with similar instances. The first point, then, which I wish to make is that the personal factor dominates all dietetic questions and that every change of food must always be more or less of an experiment. Physiologists have not yet arrived at an explanation of these personal peculiarities, but I think that their true interpretation will ultimately be found to lie in individual variations in metabolism. It is extremely likely, in other words, that a man's metabolism varies as much as the colour of his hair or the shape of his nose and that although the end results of metabolism are very much the same in all individuals, yet the steps by which those results are arrived at are capable of infinite variation. My friend Dr. A. E. Garrod[2] has recently brought forward this suggestive view as an explanation of the phenomenon known as alkaptonuria, and no doubt many metabolic diseases can be explained in the same way. Notwithstanding this, I do not think we need give up the attempt to formulate any rules of diet in health and disease in despair. As regards the general principles to be observed science can afford us clear guidance, although in matters of detail there will always be room for differences of opinion and of practice.

Before proceeding to consider the dietetics of disease it will be well for us to have some clear ideas as to the physiology of diet in health. Now, I think that the fussiness—to use what seems the most appropriate word—displayed by many people nowadays about food is not to be commended. As far as possible to take no thought what we shall eat seems the wiser and more excellent way. In particular, I think that arguments based on the character of the human teeth or shape of the alimentary canal as to the food supposed to be "natural" to man are beside the mark. We are no longer savages and it is as "natural" to man in the present stage of his evolution to live under the conditions of civilisation as it was for him at one time to live half naked in a cave. And if our environment evolves, so also must our diet. The fact seems to be that man is pre-eminently an adaptable animal and the healthy man can live upon any sort of diet provided it is capable of digestion and absorption and fulfils two well-defined conditions. These are: (1) that the food yields enough potential energy to supply the daily outgoings from the body in the form of heat and work and (2) that it contains enough proteid to replace the daily and inevitable destruction of tissue. Let us look at these two requirements for a moment.

As regards the amount of potential energy which the food must contain physiologists are quite in accord. Something between 2500 and 3500 calories will be required, depending chiefly upon the nature of the work which the individual has to perform. About 3000 calories would probably represent the requirements of the ordinary town dweller living a moderately sedentary life. Part of this total of energy must be supplied, as we have just seen, in the form of proteid. Whether the rest is to be obtained mainly from carbohydrates or from fats depends largely upon the digestive capacity of the individual and to some extent also upon his purse. Fats are, as a rule, expensive; carbohydrates are cheap and hence the poor man will tend to take a large proportion of his energy from the latter. Amongst the poorer classes, indeed, this tendency is responsible for a certain amount of disease, particularly in children, and by throwing a strain on the carbohydrate-assimilating functions it tends to bring out any inherited tendency to diabetes. Physiologically, as far as the cells are concerned, it seems to be a matter of indifference whether fats or carbohydrates predominate, but ease of digestion seems best promoted by avoiding a preponderance of either. This, too, one can say from the physiological side that the less proteid a diet contains the more should the carbohydrates be increased, for they are more efficient "proteid-sparers"—i.e., they make a little proteid go a longer way in repairing tissue—than are fats.

As regards the second requirement of a healthy diet, that it should contain enough proteid to replace the daily waste of tissue, all physiologists are agreed. Unfortunately, however, there is less accord as to the quantity of proteid necessary for this purpose. Few authorities would now maintain that the amount recommended by Voit—namely, 120 grammes—is absolutely essential, and, indeed, a careful examination of the diet of many apparently healthy persons has shown much lower figures than this. The exact quantity of proteid required seems to vary greatly in different individuals, probably with the bulk of their muscular tissue, and to some extent, also, it depends upon the amount of "proteid-sparers"—particularly carbohydrates—in the diet. What the irreducible minimum, however, below which one cannot go with safety may be we do not know. This is the more to be regretted as the scientific attitude to some systems of diet, such as vegetarianism, must depend to a large extent on the reply to this question.

Habitual use of a diet which fails to conform to the above requirements must inevitably end in disease. The error may be in the direction of excess or deficiency. Amongst the better-to-do of our patients the tendency is to take in too much total energy—i.e., to over-eat. I do not wish to go so far as the Chinese proverb which says that "most men dig their graves with their teeth," but it cannot be denied that many make themselves ill by habitually "doing themselves well." Hence result such diseases as obesity, some forms of glycosuria and dyspepsia, and in many cases also gout and the uric acid group of diseases generally, possibly also arterial and renal degeneration. The popular cry at present is for concentrated foods—the maximum of nourishment in a minimum of bulk—and the makers of patent articles of diet are not slow to respond to the demand. I believe that this is an error. What we want at present is a food which will present a maximum of bulk with a minimum of nourishment—that is to say, one which will fill the stomach whilst starving the tissues. To many overfed persons such a food would be a godsend. At the other end of

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[1] Mrs. Earle: A Third Pot-Pourri, chapter i. London: Smith Elder, and Co., 1903.

[2] THE LANCET, Dec. 13th, 1902, p. 1616.

the nervous system, and tuberculosis in all its manifestations.

The results which follow upon an improper proportion of proteid in the diet are less easy to recognise. There is reason to believe, however, that the habitual consumption of quantities of proteid much in excess of what is required to keep the tissues in repair results in some persons in the production of gout and the uric acid group of diseases generally. Probably, also, some cases of chronic renal disease and arterial degeneration may have a similar origin. On the other hand, a diet too poor in proteid seems to bring about a general feebleness of body, for proteid is a great stimulant to the vital activity of the cells, the consequence of which is a lowering of the power of resistance to disease. This may explain the great liability of the native population in India to suffer from the ravages of plague and the comparative immunity of the Europeans whose diet is richer in proteid. I am told, also, by those who have good opportunity of judging that the lower classes in Italy, whose diet is very poor in nitrogenous matter, are very apt to go down before the assaults of acute infective maladies.

Passing to the consideration of the principles which should guide us in the use of diet in disease I would lay stress again upon the importance of the personal factor. It is a wise plan always to ascertain what a patient's dietetic habits are before drawing up rules for him Nor must his likes and dislikes—or what may even seem his whims and fancies—be altogether neglected. Let us remember the shrewd saying of that great common-sense physician Sydenham, that "more importance is to be attached to the desires and feelings of the patient, provided they are not excessive, than to doubtful and fallacious rules of medical art." Though our rules are now, let us hope, less "doubtful and fallacious' than they were in Sydenham's time we can still not afford to neglect his counsel. Let us avoid, too, the offence of arbitrariness in our dietetic rules. By this I mean that one ought not to order or to forbid any article of diet without being able to give some good reason for doing so to ourselves if not to our patient. I remember a physician who had a very simple method of deciding what a patient should eat and avoid. He simply forbade everything the patient liked and ordered everything he disliked. I need hardly say that such is not the road to success in dietetic treatment.

Another great general principle which we must constantly bear in mind is what I may term the interdependence of the organs. They are "members one of another" and in prescribing a diet suitable to the needs of one organ the physician must never forget the requirements of others or of the body as a whole. I believe that neglect of this principle is one of the most prevalent errors in dietetic treatment. Nothing, for instance, is commoner than to find that a patient's diet has been ruthlessly cut down to spare his diseased stomach or kidneys until his general nutrition is brought so low that his last state is considerably worse than his first. Further examples of this we shall see immediately Lastly there remains the good rule never to make radical changes in diet abruptly. The scientific justification for this has been furnished by the recent researches of Pawlow, which show that the stomach acquires the "habit" of digesting any particular kind of food easily and secretes a gastric juice appropriate to it, and if the food is suddenly changed it takes the digestive organs a little time to adjust themselves to the new conditions and meantime the patient may suffer.

Coming closer to the subject and asking ourselves what is the value of diet in therapeutics it is well to recognise at the outset that many diseases cannot be influenced by this means at all. Change of diet is not a universal panacea any more than anything else. In enforcing this truth we must often run counter to the wishes of our patients, for nothing is commoner nowadays than for people to expect their medical adviser to draw up for them an elaborate scheme of what they should eat, drink, and avoid, no matter what their ailment may be, and to think that he has neglected his duty if he fails to meet their expectations in this respect. Now I think that there are only three great groups of diseases in which one can reasonably anticipate that dietetic means will be potent for cure. These are: (1) diseases of the organs (stomach and bowels) which prepare and elaborate the food; (2) diseases of metabolism (e.g., fever, obesity, malnutrition, diabetes, and gout) in which there exists a perversion of the usual methods of dealing with the nutritive constituents of the food by the cells; and (3) diseases of the excreto

cerned in

food. Let

should guide us in the dietetic treatment of some of these diseases.

As regards the dietetic treatment of dyspepsia—using the term in its widest sense—I would remark first of all that the mechanical form of the food must always be of more importance than its chemical composition. The reason for this is that disorders of the stomach are of comparatively little importance so long as its mechanical power of driving the food on into the duodenum is unimpaired. Now the ease with which this can be accomplished depends upon the mechanical resistance offered by the food to its conversion into chyme. The meals of the dyspeptic, therefore, must be small and must contain no ingredients which are difficult of solution. Cellulose in the vegetable foods and tough connective tissue in the animal are the things which it is of special importance to avoid. In further justification of this principle it may be observed that we do not yet know enough of the chemistry of the gastric juice or of its perversions in disease to enable us with any confidence to adjust the chemical composition of the food to the existing state of the gastric secretion. The only other general rule which I would lay down in dealing with dyspepsia is that it is important to distinguish between functional and organic diseases of the stomach. I know that these terms are open to criticism, but everyone here knows roughly what is meant by them. Amongst organic affections I would class cases of ulcer, carcinoma, catarrh, and dilatation, whilst the functional group—which, by the way, includes by far the larger number of the dyspeptics one meets with—embraces the "atonic" dyspepsias or cases of gastric neurasthenia and the functional disorders of secretion. Now from a dietetic point of view, the main distinction between the two groups is that whereas in the organic affections diet is everything, in the functional it is usually of subsidiary importance. One must be careful not to over-diet the functional cases, remembering the general principle already laid down that the requirements of one organ must not be met at the expense of the body as a whole. I saw the other day, for instance, a patient who had been kept for a long time on a fluid diet under the impression that he was suffering from malignant disease or gastric catarrh. He was much wasted and his bodily strength was greatly reduced. Under the use of a simple mixture and the encouragement to eat plenty of solid food he gained five pounds in weight in a few weeks with a proportionate improvement in all his symptoms. This was a case in which the nervous and blood-supply of the stomach, without which it cannot do its work, had been largely cut off by a diet which, with the best intentions, was designed to lessen the labours of the diseased organ. One is reminded in this connexion of the story of a young man who had lived not wisely but too well, and in consequence of his excesses suffered from serious dyspepsia. His medical adviser tried to induce him to follow a more temperate way of life and, failing in this attempt, sought to frighten him into obedience by telling him that the "coat of his stomach was entirely destroyed" "Well," replied the young man, "if his coat is destroyed the beggar has jolly well got to do his work in his shirt sleeves." That, gentleman, I believe to be the proper attitude to adopt towards the stomach in most cases of functional disorder. Treat it to a little wholesome neglect. In the dietetic treatment of disorders of the bowels, again, the mechanical condition of the food is the key to the situation. In diarrhœa one must select a diet which will leave as little unabsorbed residue as possible, whilst in cases of constipation the direct opposite should be our aim. Now the foods which leave least residue are weak decoctions of the cereals whilst vegetables and fruits leave most. When we are on this subject it might be of interest to discuss whether or not the view so often expressed is correct that the reason for the prevalence of constipation at the present day is the refinement of modern methods of preparing food. I cannot go farther into this branch of the subject just now, but my own feeling is that this theory is very far from being satisfactorily established. In recent years many authorities have advocated the treatment of neurasthenic conditions by a lacto-vegetarian diet, on the theory that such conditions are often set up and maintained by auto-intoxication from the intestine. I should be glad to know whether anyone here has had any experience of that method. Granted the correctness of the pathological theory the treatment is quite sound, for milk is undoubtedly the best intestinal antiseptic.

Of metabolic diseases we may first consider fevers. The time has long gone by when it was considered sound treatment to starve febrile patients and the modern plan seems to be to feed such cases up to the limit of their digestive capacity. It is questionable, indeed, whether the reaction has not gone too far and whether patients with acute fever are not in danger of being over-fed particularly by anxious friends and enthusiastic nurses. In chronic fevers, on the other hand, one can safely be liberal with diet and it is well in such cases to remember that fever does not in itself contra-indicate the administration of solid food if the patient has a desire for it. Local conditions of the alimentary canal, of course, may render this inadvisable, enteric fever being a case in point. Even here, however, I think it is quite possible to be too strict and we certainly want a more extended series of observations on the effects of solid food in that disease. In all forms of fever it is well to bear in mind the principle that carbohydrates should enter freely into the diet. Fats are disliked when the temperature is elevated and it has been shown that proteids not only fail to arrest the inevitable waste of nitrogenous tissues which fever entails but that their end products tend to increase still further the waste matters by which the blood is already flooded.

Obesity is a disorder of metabolism in which it is easy to over-estimate what diet can effect. One certainly sees cases in which one cannot fairly say that the total intake of food has been in any way excessive. I was consulted the other day, for example, by a man, aged 30 years, who had been growing steadily stouter since the age of 15, yet his diet had been quite moderate in amount. Such cases are hard to treat by mere restriction of food. They seem to depend on some deep-lying peculiarity of metabolism and one is tempted to suppose that in such cases the patient's body is really a more economical machine than normally or that there is an inborn tendency to form fat even at the expense of the other tissues. In the majority of cases in which we are consulted, however—those, mainly, which occur in the later period of middle life—the intake of total energy in the food is certainly beyond the needs of the tissues and where that is the case reduction of the food is the correct principle of treatment. Proteids, owing to the ease with which they are broken down, are little likely to cause harm and, indeed, a free supply of them is necessary if the patient's heart and muscles are to be maintained in vigour. The fats and carbohydrates, therefore, must be the object of our attack. Different "systems" of diet in obesity have been based on the degree to which each of these is respectively reduced but as far as the actual laying on of fat is concerned it is probably to a large extent a matter of indifference. As a rule, it is easier to restrict the carbohydrates because of the large proportion in which they enter into the diet of most people, but if the patient is a free fat-eater it may be advisable to restrict the fats as well. The question of fluids is also of less importance in the treatment of obesity than is commonly imagined. Experiment has shown that restriction of liquids does not appreciably affect metabolism, but if by forbidding a patient to drink with his meals we make it more difficult for him to get down an excess of food then of course such a restriction is justifiable. Alcoholic liquids, on the other hand, are always harmful to the obese, for alcohol is a potent sparer of fat. In the condition opposite to obesity—namely, malnutrition—our danger is that of ordering too one-sided a diet. The ease with which carbohydrates and fats can be stored up in the form of adipose tissue with a consequent increase in the patient's weight is apt to make us forget that to make a patient fat and to make him strong are not necessarily the same thing. Much of the fat put on in the Weir-Mitchell cures and in sanatoriums for consumptives is probably of little use to the patient and disappears rapidly when he returns to ordinary conditions of life. Of late, therefore, importance has rightly been attached to the advisability of a large use of proteid in the diet in cases of malnutrition. Proteid is a powerful cell stimulant and, as we have already seen, there is reason to suppose that if freely represented in the diet the resistance to disease is increased. Hence the value of meat to consumptives.

With the principles of diet in diabetes I may deal very briefly, for there is probably greater unanimity in this matter than in any other dietetic question. Everyone will agree that the object of treatment in this disease must be to remove sugar from the blood and all are aware of the importance of restricting the carbohydrates. It is apt, however, to be forgotten that to many diabetics of the severe type proteids are quite as harmful. Our great guiding principle, then, must be to insist upon a large consumption of fat, for that ingredient of the food alone is devoid of risk. In this disease, too, let us remember the general rule already laid down that the patient's nutrition must not be allowed to suffer in the mere attempt to remove his symptoms. In the severer cases, especially, the advice of the French statesman in another connexion should constantly be present to our minds: "*Surtout, pas trop de zèle!*" I think we would not be far wrong if we adopted it as a general rule that the milder a case of diabetes the more rigid should the restriction of diet be.

If diabetes is a disease about which our views are probably in a fair degree of harmony I fear the same cannot be said of gout. In no question of therapeutics, indeed, are there greater differences of opinion and practice than in the dietetic management of this disorder. One man forbids sugar, another alcohol, and another flesh foods, whilst yet another will put his patient on a diet consisting exclusively of lean meat and hot water. Let us see whether chemical pathology can afford us any guidance in this confusion. I suppose everyone will admit that uric acid is the *materies morbi* in gout and that our chief object must be to prevent its entering the blood. Now the uric acid of the body is derived from two sources. In part it is produced from certain chemical substances contained in the food (exogenous uric acid) and in part it is derived from the cells themselves (endogenous uric acid). The former of these can alone be controlled by diet. What, then, are the foods which yield no uric acid on assimilation? They are these: milk, eggs, vegetables (except asparagus and onions), fruits, and cereals (except oatmeal). On the other hand, all flesh foods, and particularly those which are rich in nuclein, such as the viscera (liver, kidneys, pancreas, and thymus), are fairly rich sources of uric acid and so also are the extractives of meat in all forms. Peas, beans, and lentils also yield uric acid and so does the caffeine contained in coffee and tea. The only strictly scientific diet for gout, then, is one from which all the articles just mentioned are excluded as has been especially insisted upon by Dr. A. Haig. On the other hand, there is the endogenous uric acid to reckon with and even although no uric acid producing substances are taken in with the food enough may still be produced in the body to give rise to gout. That is probably why dietetic means alone constantly fail to cure gout. The endogenous uric acid is the dark horse and in some cases there would appear to exist a vice of metabolism which causes it to be produced in undue amount or which renders its further oxidation impossible. These are the patients who continue to suffer though their diet is as spare as that of a Trappist monk. The question is sometimes asked: Why is it, if flesh yields uric acid, that a diet of lean meat and water suits some gouty subjects so well? The explanation of this apparent paradox I believe to be that such a diet is free from proteid-sparers. So long as these are absent the oxidation of the proteid is so complete that little uric acid is left over.

We come, lastly, to the principles which should guide us in the dietetic treatment of renal disease. Here I would draw a sharp distinction between acute and chronic cases. In acute nephritis, especially so long as blood is present in the urine, an exclusively milk diet is, by common consent, that which gives the best results. Although clinical experience is quite conclusive on this point the scientific explanation of the advantages of milk is not yet forthcoming. To some extent, of course, it acts as a diuretic and it has the advantage of being free from those extractive matters which meat contains and which appear to be irritating to the kidney. The fact already alluded to, that milk is an intestinal antiseptic, may also help to explain its suitability, for under its use products of putrefaction such as the ethereal sulphates which are normally absorbed from the bowel and excreted by the kidney are greatly lessened In chronic nephritis affairs are more complicated I was consulted only last week by two patients who illustrate a couple of fallacies which are current about the dietetics of that disease Both were men beyond middle life suffering from granular kidney One of them had been told to eat no meat but to drink milk instead, the other had, on the advice of friends, adopted a diet from which the "red meats" were excluded but which contained chicken and fish In both instances, I submit, the diet was incorrect, but the error was much graver in the former case than in the latter In the case of the first patient the general principle on which I have already laid stress had been neglected—namely, that one should never arrange a diet suited to the requirements of one organ to the neglect of the others Now a patient with chronic renal disease must maintain a vigorous heart, for if his heart fails his blood pressure falls, his urine becomes scanty, and he is apt to pass into uræmia But a vigorous heart cannot be maintained on milk alone and, as a matter of fact, in the former of these patients cardiac failure was beginning Hence it is that in chronic renal disease meat must not be altogether abolished from the diet, although foods which contain only the extractives of meat without its albuminous elements should be rigorously avoided I am aware that animal food tends to send up the blood pressure and in cases where the arterial tension is high it often requires fine steering to avoid the risk of an apoplexy on the one hand or cardiac failure and uræmia on the other—but the latter risk is quite as great as the former, although it is so much oftener forgotten But what was the fallacy in the case of the patient who ate white meats but not red? Well it has recently been shown by van Noorden and his pupils that the white meats are as rich in extractives as red, so that the substitution of the former for the latter in the diet, though harmless, is also devoid of advantage Whilst I am on the subject of fallacies in the treatment of chronic renal disease let me take occasion to indicate another It is commonly said that even in cases of chronic nephritis in which there is a considerable amount of dropsy, as, for example, in large white kidney, one should allow the patient *to drink plenty of liquid in order to promote elimination* Now it has recently been shown by careful clinical observation that this idea is groundless Restriction of fluids in such cases not only does not interfere with excretion but has the advantage of helping to remove dropsy One need have no hesitation, therefore, in recommending a dry diet to such patients

Now, gentlemen, I have come to an end I have been obliged to exclude many important subjects from this hurried survey, but I have tried to set up as many pegs as possible on which to hang discussion In particular I regret that I have been unable to refer at all to the important question of beverages Might I, in closing, venture to suggest that on some future occasion the society should hold a discussion on what, if I may coin a much-needed word, I would call the principles of "bibetics"?

THE DRAINAGE OF THE KNEE-JOINT IN ACUTE SUPPURATIVE ARTHRITIS[1]

BY HAROLD L BARNARD, M S LOND, F R C S ENG,

ASSISTANT SURGEON TO THE LONDON HOSPITAL

AN acute pyogenic infection of the knee joint is one of the most dangerous of suppurative diseases and one of the most unsatisfactory class of cases that a surgeon can be called upon to treat Other collections of pus in the body can be efficiently and reliably drained and are attacked by the surgeon with confidence, but when the knee joint is filled with pus a feeling of helplessness and futility appears to overshadow the treatment The results only too well justify this feeling Many of these cases of suppurative arthritis occur in hospital and follow wiring of patellæ or removal of semilunar cartilages or foreign bodies They are under constant medical supervision and therefore they are recognised early They receive prompt attention and are afterwards treated with all the resources at the command of the surgeon who has had this unfortunate accident, yet what are the results? Many deaths, more amputations, and the rest of the patients after months of suppuration leave the hospital in broken health with the knee ankylosed and often open sinuses

The method usually adopted to drain the knee joint is to make lateral incisions two or three inches long on either side of the patella and to pass tubes from these across the joint and up into the subcrureus bursa The joint is then irrigated with some antiseptic solution such as carbolic lotion (1 in 40) or perchloride of mercury (1 in 1000) The leg is then placed on a back splint and surrounded with copious fomentations or dry dressings

Mr Jacobson in his "Operative Surgery," when speaking of draining the knee joint after wiring the patella, says that, should it be decided to do so, "drainage should be employed through the wound to the most dependent part of the joint at the outer side (Lister), thrusting the instrument here through the joint and soft parts, cutting upon it and drawing a drain through" It was an attempt and a failure to do this in a case of suppurative arthritis which induced me to carry out this investigation of the anatomy of the knee joint and which led me to plan the posterior incisions recommended in this paper

In 1888 Sir Frederick Treves advocated in the *British Medical Journal* of July 7th continued irrigation in such cases with some weak antiseptic By blocking the outlet tube the joint was distended with the fluid once or twice a day He published two most hopeful cases in which good movement was obtained after the treatment. Quite recently one of Sir Frederick Treves's patients came to my out-patient department at the London Hospital for some other matter His knee had practically perfect movement Unfortunately the treatment has not led to similar results in a series of cases under several surgeons at the London Hospital There have been seven cases in the last ten years treated by this method Two of the patients died from pyæmia, four had fibrous ankylosis after many weeks in hospital One patient [illegible] open sinuses In only [illegible] ie value of any treatment [illegible] to really bad cases of [illegible] afraid that the very hopeful results of continued irrigation are further militated against by the fact that the first two cases reported appear to have been mild ones The first had been opened for chronic synovitis and drained After a week or so the knee became infected apparently when the tubes were removed They were at once replaced and the knee was more thoroughly drained Continued irrigation was established a few days later This joint, which was being drained even before it was infected, can hardly be considered on a par with the cases of punctured wound where for some days the pus is retained in the joint under high pressure and no doubt with increasing virulence The second case followed a fall without a wound and the temperature was only 101° F

Many years ago, when I was a dresser, a case of suppurative arthritis of the knee joint in a child was treated in the London Hospital first with ordinary lateral drainage and then with continued irrigation, but, as both these measures failed to drain the joint efficiently and the temperature continued to range at a high level, the surgeon in charge laid open the knee joint by a curved incision across the front of it and divided the patella and fully flexed the knee, so that all parts were fully exposed The result was satisfactory

Mr Walter Whitehead has recently reported a favourable case in the *British Medical Journal* The knee was infected whilst a loose cartilage was being removed Free drainage and *irrigation were adopted but failed.* The patient was delirious, his temperature was 103° F, and he was in a state of extreme exhaustion His knee was then laid freely open by a transverse incision, the patella was sawn across, and the crucial ligaments were divided The joint was packed with gauze after it had been thoroughly cleaned. The patient rapidly convalesced and in 15 days the granulating surfaces of the joint were placed in an extended position. He made a good recovery with a stiff but straight leg This method is no doubt efficient in all cases in which the pus has not burst through the capsule behind and is already tracking up and down the leg But it is heroic and in every case in which it is applied all hope of a mobile joint is necessarily relinquished The leg is moreover greatly damaged by the *free division* of the quadriceps insertion and other muscles sending expansions to the capsule of the joint In short, it should be, as indeed it is, a forlorn hope of conservative surgery when amputation is refused or when the surgeon still hopes against hope to save a limb for the condition of which he is responsible.

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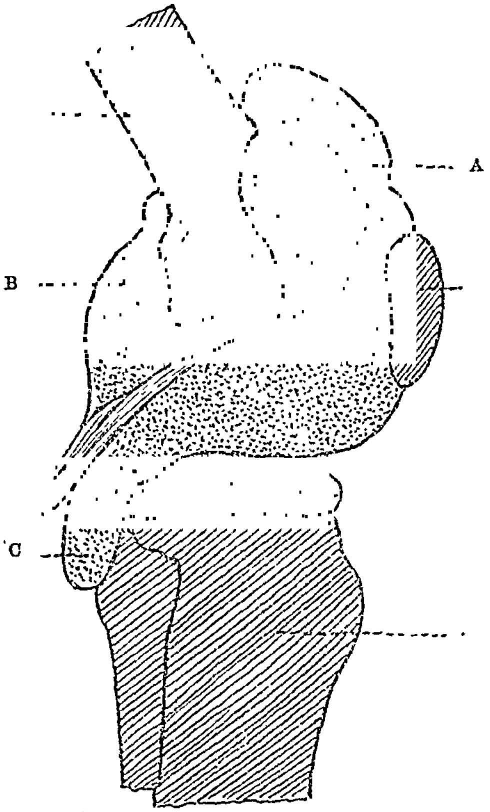
[1] A paper read before the Clinical Society of London on Feb 13th 1903

It was this gloomy experience of the general failure of the present methods for draining the knee-joint which induced me to investigate the anatomy of this serous cavity in order to discover why it was so difficult to drain it, and whether incisions could not be planned which should make the retention of pus within the cavity of the joint impossible.

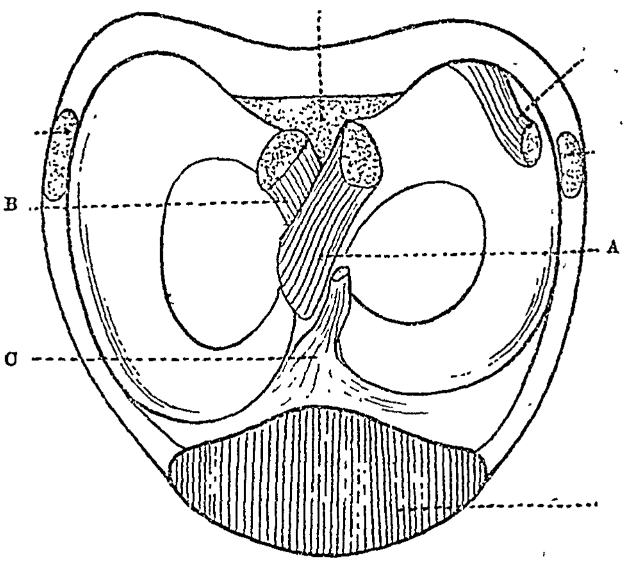
Fig. 1.



Longitudinal section through knee-joint.

This figure of the complicated synovial membrane of the knee-joint is taken from Testut's Anatomy. The great subcrureus bursa (Fig. 1, A) is well known and where the joint is drained it is never overlooked; but this is not the case with the complicated pouches at the back of the joint. The knee-joint is divided into two main pouches behind by a septum projecting forward from its posterior wall and formed in order from behind by the posterior ligament, the crucial ligaments, and the ligamentum mucosum (Fig. 2). Each of these pouches receives the posterior protuberant extremity of the corresponding condyle in extension. These pouches terminate above and behind the condyles in sacs which are beneath the corresponding head of the gastrocnemius (Fig. 1, B). The outer pouch also sends a synovial prolongation along the popliteus tendon (Fig. 1, C). The usual method of draining the knee-joint by a tube passed below the patella and another passing up into the subcrureus bursa leaves these two posterior pouches untouched. The leg in such cases is kept extended on a splint, which closes the way to the front of the joint by a coaptation of the bony surfaces. When these pouches rupture from distension with pus their anatomical position directs the pus up to the thigh between the hamstring and the great adductor and down the calf between the gastrocnemius and the deep muscles. It is difficult, if not impossible, to drain both these collections of pus at once. For if the leg be elevated the lower will drain but the upper will not, and *vice versâ* if the leg be lowered. It is clear, then, that each of these posterior pouches must be drained by an incision placed as far back as possible. On the inner side, the knee being fully extended, the protuberant extremity of the condyle is cut down upon and a pair of stout forceps are pushed under the head of the gastrocnemius and withdrawn open. A tube is then inserted. This is more easily done if the knee be flexed as the tube is put in, since this relaxes the head of the gastrocnemius and the posterior ligament. This incision will be found to be between the sartorius and gracilis tendons and usually just behind the internal saphenous nerve.

Fig. 2.



Transverse section through knee-joint. A, B, crucial ligaments. C, ligamentum mucosum.

In a similar way the outer condyle is cut upon. The incision here passes between the biceps tendon and gastrocnemius and just behind the external popliteal nerve. It is important, therefore, in both cases to be careful in the use of the knife and to see that the incision is in the line of these nerves. When the skin has been incised it is easy to scrape down to the capsule with some blunt instrument. The knife can then once more be safely used to open the joint freely. Anatomical guides are useless in practice because of the inflammatory swelling; one knows that the pouch surrounds the prominent condyle, which can easily be felt, and one cuts down until the cartilage of the condyle is reached. A drainage-tube should be passed across the front of the joint beneath the patella and another should be directed up into the subcrureus bursa from either the inner or the outer side. This tube can with advantage be brought out through a median incision at the highest point of the joint anteriorly. The discharge from the anterior tubes rapidly diminishes and the wounds heal some time before the two posterior incisions cease to discharge and close. This is proof in itself that the drainage is practically as well as theoretically correct.

I have treated nine cases by this method, and in all the temperature reached normal in a day or two, appearing to show that no pus remained in the joint under tension. The evacuation of the pus was greatly assisted in several cases by gentle stroking massage of the subcrureus bursa from above and of the popliteus bursa from below, movements which can be simultaneously carried out. As soon as the temperature is normal I would recommend massage and passive movement. These must be carried out by a thoroughly efficient masseuse. The method is the same as for fractured patella and is directed to similar ends. The patella is firmly grasped and moved about on the condyles of the femur, so that it may not form adhesions to it. The knee is then steadily lifted from the bed so as passively to flex the knee-joint.

We have so far seen that anatomy indicates the presence of those large pouches behind the knee and that they can easily and effectually be opened and drained. It only remains to narrate a typical case of acute suppuration which I had an opportunity of seeing some time ago, in which this was not done, and these pouches ruptured and apparently involved the popliteal vein, leading to pyæmia. An old and somewhat alcoholic man fractured his patella. After an interval of about a week the fragments were wired together. Unfortunately, the knee became septic about the third day. The knee was opened by the usual anterior incisions and continued irrigation was instituted. In about a week the patient died. At the necropsy pus was found in the depths of the popliteal space tracking down into the calf around the vessels and up the back of the thigh The lungs were studded with pyæmic abscesses. Before narrating the nine cases I have treated in this way I should like to say that they were consecutive The first four were traumatic cases and have done much better than the last five which were cases of auto infection.

CASE 1 *Wound of the right knee joint with a rusty hat pin, suppurative arthritis, drainage by anterior and posterior incisions, rapid recovery*—This case was under the care of Mr C W Mansell Moullin who kindly gave me permission to use it The patient, a little girl, aged eight years, was admitted to the London Hospital on Jan 18th, 1901 Seven days before admission she ran a rusty hat pin into her right knee The hat pin was extracted by her medical attendant and the wound healed. On admission the right knee was red, hot, swollen, and œdematous and tightly distended with fluid which an exploring needle proved to be pus Her temperature was 103° F and her pulse was 110 Her general condition was bad and she suffered great pain in her knee On the same day Mr Hugh Lett, who was house surgeon to the case, operated by the posterior incisions recommended in this paper in addition to the usual anterior ones Pus under high tension spurted from the incision on the inner condyle The progress of the case was satisfactory The temperature fell to 99 5° in three days and reached normal in six days The tubes were removed in 14 days

It is very interesting to note in this case that the anterior incisions closed some time before the posterior ones, a fact which seems to indicate that a posterior drain is right in practice as well as in theory She can run and walk well and her knee can be flexed nearly to a right angle

CASE 2 *Suppurative arthritis of the left knee joint following lymphangitis and incisions, drainage by posterior incisions*—A boy, aged 15 years, was admitted to the London Hospital on March 7th, 1901 One month before admission he contracted a sore upon his foot from the rubbing of his boot Lymphangitis spread up his leg and led to an abscess over the lower part of the tibia and another over the internal condyle of the femur These abscesses were opened by a general practitioner On admission to the hospital the lad had a sinus in the lower third of his left leg and another on the inner side of his knee, which entered the popliteal space The knee was flexed somewhat and contracted The temperature was normal Two days after admission the house surgeon straightened the knee under an anæsthetic and thoroughly opened up and drained a large collection of pus lying in the depths of the space near the knee joint On the next day the knee became distended with fluid and very tender The temperature rose to 103° F and on the following day it was 104° On March 11th I opened up the knee joint by five incisions Two were placed on either side of the patella and a tube was passed across the front of the knee joint One passed through the quadriceps into the upper extremity of the subcrureus pouch and a tube was passed from this incision out of the inner lateral incision Each condyle was cut on to in turn from behind and a tube was inserted As the joint was opened by the inner incision pus gushed out The temperature fell from 104° to 99° in 36 hours and the leg became much less swollen and painful It was some time before the sinuses closed but the temperature did not again become raised above normal for 24 hours

I have, unfortunately, not been able to trace this boy and therefore cannot give his ultimate condition which promised to be good

CASE 3 *Compound fracture of the patella, suture, suppuration, drainage, recovery with good movement*—This case has already been fully reported in the Transactions of the Clinical Society The chief points are these The patient was caught by an engine in August, 1900 whilst crossing the track, and struck upon his patella so that this bone was crushed and the lower fragment projected from the wound The parts were freely exposed and thoroughly washed and the more ragged tissues were cut away finally, the fragments were brought together by a kangaroo tendon after Stimson s method. For seven days the case did well then cellulitis commenced, and in the course of the next two months much of the subcutaneous tissues round the knee sloughed away The knee-joint became swollen and very tender It was therefore opened on either side of the patella and behind in the manner advocated in this paper His knee was very slow to heal but recovery was hastened by massage and passive movements

The ultimate result was much better than could have been anticipated The patella was united by bone and the knee joint could be flexed to a right angle He could walk and run practically without a limp It must be admitted, however, that this was a mild infection The result is practically perfect as regards his knee, although he still appears to be suffering from traumatic neurasthenia

CASE 4 *Wound of the right knee joint with glass, suppurative arthritis, drainage*—A boy, aged 14 years, was admitted under my care into the London Hospital on March 23rd, 1902 Ten days previously he fell on a piece of glass, wounding his right knee, which had been swollen ever since but he was able to walk until two days before, when it became exceedingly painful and swollen. On admission the knee presented all the signs of suppurative arthritis His temperature ranged from 103° to 104° F His general condition was good, but he had a tendency to be delirious at night Operation was performed on the day of admission, the knee joint being laid open front and back and drained with tubes The drainage was not strikingly efficient in this case The temperature slowly declined but did not actually reach normal The change for the better really occurred in his case when Mrs Palmer, masseuse to the London Hospital, began to massage the joint and to produce passive movement She found that gentle stroking movements in front from above down towards the patella evacuated large quantities of pus and that a similar result followed upward massage of the calf behind Apparently the pus was bagging in these two situations where, as we have seen, deep pouches of the knee joint exist.

The joint promised to have some movement when the patient left the hospital, but he fell soon after and wrenched it, and since then it has been quite stiff and flexed I propose to take him into the hospital, to straighten his knee, and to give him a poroplastic splint to prevent recontracture.

CASE 5 *Suppurative arthritis of the left knee probably due to leucorrhœa, drainage, persistent sinuses*—A married woman, aged 23 years, was admitted to the London Hospital on July 18th, 1902 Three days previously her left knee had become swollen and painful Her temperature was 100° F She was three months pregnant No cause could be found for the suppuration except a leucorrhœal discharge A needle was inserted into the knee joint and pus was withdrawn which, although sent to the bacteriological department, was apparently lost The joint was then drained and irrigated with biniodide of mercury solution in a manner exactly similar to previous cases For ten days after the operation the temperature remained absolutely normal The tubes were then removed and the temperature began to oscillate The tubes were replaced and several subsequent attempts were made to remove the tubes, but on each attempt the joint again became distended with pus and they had to be replaced At a subsequent operation bare bone was found extending some distance down the back of the tibia and it seems probable that the mischief in the knee had originated in the head of the tibia

When last seen the sinuses were still open. The temperature was normal, but the synovial membrane was greatly thickened and pulpy and closely resembled that of a tuberculous joint I propose thoroughly to lay open this knee joint at an early date and to deal with whatever condition may be encountered.

CASE 6 *Purulent synovitis of the right knee joint apparently due to a leucorrhœal discharge in a woman, aged 65 years, drainage, temperature normal next day, later amputation for persistent sinuses and painful joint*—The patient, an elderly female, was admitted to the London Hospital under the care of Mr Jonathan Hutchinson jun whilst I was his substitute Six days before admission she was seized with severe pain in the right knee which became hot and swollen She had several rigors *No cause was given for this condition* except that it might have been produced by kneeling whilst scrubbing floors She had suffered from leucorrhœa for several weeks On admission her general condition was very bad indeed, she was in a typhoid condition Her tongue was dry and brown and her lips were covered with sordes Her temperature was 102° F The right knee was tense tender, hot painful, and red. The exploring needle withdrew thick pus The knee was freely laid open and drained by four incisions one on either side of the patella, from the inner one of which a tube passed up into the subcrureus pouch and another across the joint below the patella. The two posterior pouches were laid open and tubes were passed in through the incisions whilst the knee was flexed, which, it was found, relaxed the structures and enabled the tubes easily to be placed in a good position. The temperature fell to normal on the next day and her general condition rapidly improved. Her subsequent progress was not, however, satisfactory. For a fortnight her temperature oscillated each night from normal to a degree or two above, but when upward massage over the calf was begun it remained normal. This procedure evacuated a considerable quantity of pus from a deep pouch which was probably the popliteus bursa as in Case 8.

When Mr. Hutchinson returned to the hospital about two months after the operation, although the temperature remained practically normal, the knee was exceedingly painful and the poor old woman showed the feeblest signs of repair. All the sinuses were open, although the discharge from the anterior ones had practically ceased. Mr. Hutchinson therefore amputated the leg in the lower third of the thigh. She made a rapid recovery.

CASE 7. *Tuberculous epiphysitis of the lower epiphysis of the femur; incised by a general practitioner; erysipelas; infection of the knee joint; drainage; recurrent attacks of erysipelas; amputation.*—A small ill-nourished boy, aged three years, was admitted to the London Hospital on July 28th, 1902. The history was that seven weeks previously a painless swelling had appeared over the inner condyle of his right femur. This was incised by the family medical attendant who plugged it with gauze and fomented it. 14 days before admission he became feverish and delirious and a red mottled swelling started from the wound and spread up and down his leg; soon after his knee-joint became distended and painful. On admission a sinus was found on the inner side of the right knee which led down to carious bone. The popliteal space was greatly swollen and contained much pus. The knee was obviously the seat of suppurative arthritis. It was drained and irrigated in the manner advocated in this paper and in five days the temperature reached normal and remained there except during a relapse of erysipelas. The patient did not, however, do well. The sinuses remained open and after a serious attempt to remove all the diseased bone from the carious focus in the end of the femur which failed, but which apparently lighted up the septic mischief once more, the leg was amputated in the middle of the femur.

The specimen is shown here. It will be seen that the joint cavity is obliterated by fibrous tissue and the result at the best could only have been fibrous ankylosis. In the lower femoral epiphyseal line in the situation previously occupied by the internal condyle is a carious cavity filled with purulent tuberculous material which formed the primary focus of the whole trouble.

CASE 8. *Acute pneumococcal arthritis of the right knee-joint; drainage.*—This case was under the care of Mr. H. P. Dean who has kindly allowed me to use it. I was substitute for him at the time. A boy, aged 14 years, was admitted to the London Hospital on July 30th, 1902. A month previously he had suffered from influenza from which he was convalescing when seven days before admission he was seized with severe pain and swelling in the right knee which became progressively worse. There had been no accident. On admission the boy's condition was very bad. He was emaciated, his temperature was 104° F., and his pulse was rapid and feeble. The lungs gave no signs of existing disease. His spleen was not enlarged or tender. The whole of his right leg from the lower third of the thigh to the toes was tremendously swollen, red, and œdematous, so that it was at first a matter of doubt whether the case was one of acute periostitis of the tibia with pus spreading up and down the limb or distension of the knee-joint with pus which had extended beyond the capsule behind and involved the popliteal vein and lymphatics. The characteristic position of the knee-joint in semi-flexion with well-marked fluctuation decided the point. A medium-sized trocar passed under the patella failed to evacuate pus but as it was withdrawn a gelatinous cord of pus followed it. The knee-joint was then laid open by anterior and posterior incisions. The cavity of the joint was full of clots which so closely resembled those seen in pneumococcal empyemata that a diagnosis of pneumococcal arthritis was at once made. The report of Dr. William Bulloch, bacteriologist to the London Hospital, was as follows: "Films show no organisms. Culture shows slight growth of cocci in short chains, most probably pneumococcus." The temperature reached normal on the fifth day, but continued to oscillate to about 100° each night until the fourteenth day, when Mr. Dean, who had returned from his holiday, explored the back of the knee-joint, divided some part of the posterior ligament of the knee-joint, and evacuated a pocket of pus tracking down the back of the tibia apparently in connexion with the popliteus bursa. The temperature then ceased to oscillate and the boy rapidly recovered.

I think there is very little doubt that at the time of the first operation the popliteal pouch of the joint had already ruptured and that the popliteal vessels were pressed upon. This would account for the great œdema of the leg and foot which rapidly subsided after the first operation and such a collection of pus, although ill-drained, was certainly found 14 days later.

CASE 9. *Acute suppurative arthritis of the knee-joint occurring in the course of whooping-cough; posterior drainage.*—A little boy, aged five years, was admitted under my care into the London Hospital on August 27th, 1902. For five months he had been suffering from whooping-cough which he still had. Two days before admission he fell, striking his knee but producing no wound or abrasion. He had not walked since the accident. On admission the condition of the child was very serious. His temperature was 103° F., his pulse was rapid and feeble, and he was quite delirious. The knee was distended with pus and was red, hot, and œdematous. The pus removed by the exploring needle was examined by Dr. Bulloch and found to contain a pure culture of streptococci. The knee-joint was freely drained on the day of admission in the manner advocated. The temperature was normal in four days but suppuration continued for three weeks. The tubes were removed 25 days after operation. His recovery was unfortunately delayed by two attacks of erysipelas, but ultimately he was sent away to the country where his sinuses rapidly healed.

He now has slight movement of his knee-joint which I hope persistent massage may improve.

Some of the cases in this series are not, I admit, very happy ones, but they are, as I have said, consecutive. The four traumatic infections which are usually regarded as so much worse did very well. Two patients had good movement and one had some movement when he left hospital. The other has fibrous ankylosis. The five cases of blood infection were most unsatisfactory in their progress. Two patients had the leg amputated but it will be seen that one was an old woman, 65 years of age, in whom though her temperature had been reduced for weeks, the sinuses seemed unable to heal. The other case was one of tuberculous abscess in the end of the femur which became infected with erysipelas and invaded the joint.

The earlier traumatic cases had led me to hope that if the infected joint were taken in time and efficiently drained behind as well as in front, we might confidently count on obtaining a mobile joint, but subsequent cases, more especially those due to auto-infection, have made me less sanguine.

I am still confident that this method of efficient drainage will cope successfully with the immediate dangers of sepsis, septicæmia, pyæmia, and the formation of large abscesses burrowing up and down the leg, for in no case did the temperature fail to reach normal in a few days. It is, however, clear that the subsequent progress of the cases, whether suppuration becomes chronic and sinuses persist or whether the cartilages are destroyed and fibrous ankylosis follows, depends mainly on the cause of the suppuration. We can scarcely hope to save the leg if the disease originates from a focus in the femur or tibia. The two most unsatisfactory cases of all arose apparently from a leucorrhœal discharge. I very much regret that no bacteriological report is forthcoming in either case.

In conclusion, I would advise that all really acute cases of suppuration in the knee-joint, say with a temperature ranging from 103° to 104° F., should be treated by anterior and posterior incisions, more especially if they arise from punctured wounds. When the suppuration arises from auto-infection and is subacute, with a temperature of not more than 102°, I should be inclined—taught by the cases recorded above—first to make lateral incisions on either side of the patella and to wash out the joint thoroughly and to drain it. The joint must be treated as though it were an aseptic case, for in auto-infection we have usually to deal with one micro-organism only, and that often a mild one. We must therefore beware lest in casting out one micro-organism we admit several others worse than the first. Should this partial drainage fail to bring the temperature down in a day or two the posterior pouches should be laid open and thoroughly drained.

Wimpole street, W.

*** The two figures illustrating Mr. Barnard's article have been kindly supplied to us by the courtesy of the editor of *The Practitioner*.—ED. L.

INVAGINATION OF MECKEL'S DIVERTICULUM.[1]

BY J. F. DOBSON, M.S. LOND., F.R.C.S. ENG.

ON July 29th, 1902, I saw with Dr. F. J. Coleman of Leeds a little boy, aged four and a half years, who had been suffering for 36 hours from acute abdominal pain accompanied by vomiting and the passage of blood and mucus from the bowel. A swelling had appeared in the right iliac region and a diagnosis of intussusception had been made. When I saw him there had been no vomiting for several hours, but he was in constant pain; the pulse was 120 and the temperature was normal. A soft moveable tender swelling was detected in the right iliac region extending upwards to the right costal margin, which was undoubtedly an intussusception. He was removed to a surgical home and an operation was performed the same evening.

Chloroform was administered and the abdomen was opened by an oblique incision over the tumour, the muscular fibres being separated without division. The peritoneum was opened, a quantity of serous fluid escaping, and the tumour was withdrawn from the abdomen. It was found to be an intussusception of the ileo-colic variety and was reduced without much difficulty until the apex was reached. A pedunculated swelling was then found projecting into the interior of the intestine and forming the apex of the intussusceptum. This swelling was evidently an invaginated Meckel's diverticulum, as shown by the dimpling of the peritoneal surface of the gut and the presence of a small mesentery which disappeared into this dimple. An attempt was made to reduce this invagination by pressure, but the surrounding intestine was in an extremely bad condition and tears began to appear in the peritoneal coat. It was evident that the invagination could not be reduced. The loop of bowel implicated was emptied by pressure and tied off with a piece of rubber tubing. The tumour and surrounding portion of bowel were then resected with scissors. The section did not completely divide the loop of intestine, its continuity being maintained by a narrow strip at the attachment of the mesentery. There was a great difference between the intestine above and the intestine below the seat of resection. Below, the intestine was distended to twice the size of the intestine above; its walls were much thickened and infiltrated; there were extravasations of blood under the serous coat and necrotic patches in the mucous membrane. Above, the intestine was almost normal in appearance, empty, and contracted. It was rather doubtful whether sutures would hold in the wall of the intestine below, but the patient was in such a bad condition that it was impossible to resect more intestine. A small Mayo Robson's bobbin was inserted into the intestine and continuity was restored by two layers of continuous sutures over the bobbin, an inner suture of fine catgut passing through all the coats and an outer suture of fine silk passing Lembert fashion through the serous and muscular coats. The loop of intestine was placed immediately beneath the abdominal incision, the omentum was so arranged as to isolate it from the general peritoneum as far as possible, and a small drainage-tube was passed in through the middle of the wound, which was then closed by three layers of sutures. There was a copious discharge of serum through the drainage-tube during the first 24 hours. The patient passed a restless night, the pulse gradually increasing in frequency; [illegible] me extremely ill, the pulse ro[illegible] dying. One and a half pint [illegible] infused into the right median basilic vein, large doses of liquor strychninæ were given hypodermically, and the lower bowel was washed out. A copious evacuation of extremely offensive bloody fluid resulted and the patient immediately began to improve, the pulse-rate falling within half an hour from 200 to 130. On the following morning the pulse was 120 but the temperature had risen to 103° F. There was some general distension of the abdomen and he complained of considerable pain in the region of the wound, but there was no vomiting. The discharge from the drainage-tube became purulent and rather offensive; evidently there was some peritonitis around the sutured intestine which was no doubt due to infection from the interior of the bowel at the time of operation. The bowels were moved by turpentine enemata and the disten[illegible] the drainage-tube rapidl[illegible] and he was able to tak[illegible] any discharge of fæc[illegible] August 9th the wound was entirely healed with the exception of a small granulating area at the site of the drainage-tube, the patient was taking light food very well, and the bowels were acting regularly. At present the child is in excellent health

In the first edition of his work on Intestinal Obstruction Treves mentions a specimen of an invaginated Meckel's diverticulum in the Guy's Hospital Museum which he says is "probably unique." The invaginated diverticulum had given rise to a fatal intussusception. In the second edition of the same work is figured a specimen[2] from the Museum of the Royal College of Surgeons of England consisting of an invaginated Meckel's diverticulum which had led to a fatal intussusception. The Museum of St. Bartholomew's Hospital contains two similar specimens, one from Adams's case[3] and one reported by Willett.[4] In both cases the specimens were obtained post mortem. Boldt[5] at a meeting of the New York Pathological Society showed another similar specimen. Cases have also been reported by O'Conor,[6] Adams,[7] Betham Robinson,[8] Pitts,[9] Eve,[10] Erdmann,[11] Ewald,[12] Weil and Frankel,[13] Hohlbeck,[14] Kuttner,[15] Stubenrauch,[16] Wainwright,[17] and Travers[18]—in all, 13 cases. Of these 13 cases four recovered—O'Conor's, Pitts's, Wainwright's, and Travers's cases. In O'Conor's case a slough of intestine with an inverted diverticulum was passed on the ninth day. In Wainwright's case the intussusception and the invaginated diverticulum were easily reduced, the diverticulum was clamped and cut away, and the opening in the intestine was closed by Lembert sutures. In Pitts's case the intussusception was reduced easily by pressure, and the invaginated diverticulum by the finger introduced through an incision in the bowel. In Travers's case the intussusception was reduced and the invaginated diverticulum was partially reduced, recovery ensuing.

Of the nine fatal cases in two no operation was performed and the condition was discovered post mortem; in two an artificial anus was established; and in five enterectomy was performed, followed by primary enterorrhaphy. It is noticeable that every case in which the invaginated diverticulum could not be reduced terminated fatally, with the exception of the one in which recovery followed the [illegible] Also with one exception— [illegible] diverticulum was resected [illegible] as uniformly unsuccessful. [illegible]nvagination of a Meckel's diverticulum may occur with or without an invagination of the ileum. Heller,[20] indeed, found one which hung free in the lumen of the gut without causing any disturbance. Apparently in the majority of cases the invaginated diverticulum leads first to an enteric and then to an ileo-colic intussusception. In Hohlbeck's case the mucous membrane only of the diverticulum was inverted and this had given rise to an enteric intussusception.

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[1] A paper read before the Leeds and West Riding Medico-Chirurgical Societ on Dec. 12th, 1902.

[2] Specimen No. 2718a.

[3] Specimen No. 2163a, Transactions of the Pathological Society, 1892, p. 75.

[4] [illegible]

[8] Ibid., vol. ii., 1899.

[9] Ibid., vol. ii., 1901.

[10] Ibid.

The mechanism of the production of the invagination is probably as follows: some irritant body enters the lumen of the diverticulum and gives rise to spasmodic contraction of the muscular walls. In the efforts to expel the irritant material the apex of the diverticulum becomes caught in the grasp of the circular muscle and is drawn into the lumen of the intestine; invagination of the rest of the diverticulum then follows. Once inverted into the intestine the diverticulum acts in the same way as a polypus may do, and gives rise to an intussusception. To permit the occurrence of invagination it is essential that the apex of the diverticulum be free and not attached by ligament or adhesion to the umbilicus, to the mesentery, or to neighbouring coils of intestine. It is evident that any case of intussusception is very gravely complicated by the presence of an invaginated Meckel's diverticulum, the danger consisting in the rapidity with which the invagination becomes irreducible. In some cases reduction has been possible, but in the majority, even when the intussuscepted ileum could be easily reduced, the invaginated diverticulum could not. This difficulty is due partly to the narrowness of the lumen of the diverticulum and partly to the fact that being at the apex of the intussusceptum its walls become rapidly œdematous and infiltrated with blood. It is impossible to diagnose the condition beforehand and one may find in any case of intussusception, even when the operation is performed at an early stage, an irreducible diverticulum which must be excised. When the diverticulum can be reduced it may be left, though in view of possible after-consequences, such as recurrence of the invagination, adhesion and intestinal strangulation, perforation, &c., it would be better to remove it. It is, of course, impossible to leave an irreducible diverticulum projecting into the interior of the intestine; recurrence of the intussusception is almost certain to take place, and in any case it is sufficiently bulky to obstruct the passage of intestinal contents. The diverticulum may be removed by a lozenge-shaped incision in the long axis of the gut which is subsequently closed in the transverse direction, or by cutting out the portion of intestine to which the diverticulum is attached.

It is difficult to say whether after resection of the diverticulum primary enterorrhaphy should be performed or an artificial anus established; both operations have been attended with a frightful mortality in cases of intussusception. The mere difference between suturing the ends of the intestine together and suturing them to the skin cannot in reality have any influence on the mortality; one operation is as easy as the other and can be as rapidly performed. The point to be considered in choosing between the two operations is by which method can the poisonous contents of the intestine be most rapidly and completely removed. If the intestines above the seat of resection are full and distended with decomposing fluid it would appear to be safer to establish an artificial anus. In the case under review the intestines above were collapsed and there had evidently not been complete obstruction; for that reason a primary enterorrhaphy was performed. It became evident during the first 12 hours after the operation that although the small intestines above the intussusception were empty and collapsed the intestine below had been full of decomposing bloody fluid and this gave rise to a profound and almost fatal toxæmia. It is doubtful whether this poisonous material could have been removed by forming an artificial anus at the seat of resection. In a similar case possibly it would be advantageous to drain the cæcum by a small Paul's tube and also to inject a saline aperient into the bowel as recommended by Marmaduke Sheild. It is a wise precaution to adopt drainage of the peritoneum in all cases in which plastic operations are performed on the intestines during an attack of acute obstruction as the virulence of the intestinal bacteria is at such times much enhanced; it is impossible to prevent some fouling of the peritoneum and a more or less severe attack of peritonitis may follow the operation. Somewhat allied to these cases are invaginations of the vermiform appendix which may give rise to a cæcal intussusception. Monsarrat[21] in reporting such a case suggests the use of the term "appendico-cæcal" to describe this variety of intussusception. The term "diverticulo-enteric" would be suitable as a designation of the form of intussusception produced by the invagination of a Meckel's diverticulum.

Leeds.

NOTES OF A CASE OF EXTIRPATION OF A TUMOUR OF THE PROSTATE FOR RETENTION OF URINE.

BY W. PRIOR PURVIS, B.Sc., M.S., M.D. LOND., F.R.C.S. ENG.,
ASSISTANT SURGEON TO THE ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.

THE patient was 69 years of age. No definite history of urinary trouble could be got from him except that on July 22nd, 1902, he took a long drive and may have partaken of some stimulant at the end of it. That evening he found difficulty in passing his urine and there seems to be little doubt that he had "retention incontinence" up to August 5th, on which date complete stoppage of the flow took place. He was seen by Mr. R. A. E. Bacon and by my colleague, Dr. H. P. Ward, who succeeded in passing a long bi-coudé catheter and emptied the bladder. After this Mr. Bacon, and later his locum-tenent, emptied it twice a day until the 17th. The catheter then refused to pass and Dr. Ward was called in again and was successful in passing it. At this period the patient was in a very grave condition. Rigors were of daily occurrence and hæmorrhage was free at every attempt at catheterisation. On August 19th the difficulty with the catheter recurred and the patient was removed to a nursing home for operation, where I first saw him in consultation with Dr. Ward at 11 A.M. The patient was a very stout man and his abdomen was greatly distended. He was quite unable to micturate and was suffering great pain. His temperature was 99·8° F., his pulse was 100 and regular but only fairly strong, and his respirations were 22 per minute. The condition of his kidneys could not be ascertained, but his other abdominal organs and his thoracic viscera evinced on examination no signs of disease. I was quite unable to pass any kind of flexible catheter, but with one finger in the rectum I managed to introduce a large silver prostatic catheter and drew off a great quantity of dark brown sickly smelling urine. I could feel that his prostate was very large and hard. Owing to the difficulty of passing any catheter and to the fact that it was evident that severe cystitis would soon come on I decided, after consultation, to drain the bladder by an external opening and then to see whether it was possible to remove the obstructing prostate and, if so, to attempt the operation. I chose the suprapubic route because I felt more at home with it and also because I was unable to exclude the existence of cancer of the prostate.

In the afternoon, then, of the same day, under chloroform and with the assistance of Dr. Ward, the distended bladder being distinctly felt, I made a long incision in the middle line immediately above the symphysis pubis. There was a very thick layer of fat in the abdominal wall, but the bladder was easily entered with but little hæmorrhage. There was an immediate gush of urine and on introducing the right forefinger the upper surface of the prostate could be felt forming a circular elevation like a rampart all round the internal urinary meatus. There was no calculus and there were no sacculi connected with the bladder. I introduced the first two fingers of my left hand into the rectum and so pushed forward and steadied the prostate, while with my right forefinger I first scratched through the mucous membrane on the prostate to the right of the urethral orifice and then worked my way between the tumour and what I may call its surgical capsule. The whole of the upper part separated fairly easily, but there was considerable difficulty below and in front where the prostate abuts on the triangular ligament. This, perhaps, was due in a measure to the density of the tissue connecting the tumour with its capsule at that point, but was more owing, as it seemed to me, to the great size of the structure which I was removing, which prevented me from getting my finger far enough round it. The difficulty was finally overcome by tearing the tumour up into four approximately equal portions, the first two fingers being used to do this and to extract the fragments from the bladder. In this case the mucous membrane of the prostatic urethra certainly came away. The tissue left between the cavity and the rectum was very thin. There was a good deal of hæmorrhage for a short time after removal of the fingers from the bladder. This was washed out with sterilised water, the ends of the wound were closed with sutures and a large drainage-tube was inserted right down to the bottom of the cavity formerly occupied by the tumour. I was unable to replace the four portions of the growth in their correct relations or to trace the former position of the urethra. The weight was *six* and a *half* ounces and the *size* was that of a large orange.

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[21] Brit. Med. Jour., vol. ii., 1900.

The operation was over at 4.40 P.M., but the subsequent course of the case was not all plain sailing by any means. Within an hour a severe rigor set in. The temperature at 6 P.M. was 101·4° and at 9 P.M. 103°, the pulse being 133 and the respirations 40. At 10 P.M. it had begun to abate: the temperature had dropped to 101·2°. That night the patient slept for two and a quarter hours and took milk and brandy. On the next day his temperature at 6 A.M. was 99° and at 6 P.M. it was 100·4°. Never after this did it exceed 100°, but the pulse continued to range from 92 to 104 and the respirations from 20 to 28 for many days. On the third and fourth days his condition caused me some anxiety on account of heart weakness, and he was injected with one-sixtieth of a grain of strychnine sulphate every quarter of an hour, but on the fifth day he could eat a baked custard. On the seventh day a number of large blotches of a purpuric eruption came out on the backs of both hands and lasted about a week, gradually fading away. I am at a loss to account for this. On the ninth day the patient stated that he passed a few drops of urine through the penis, but as his bed was always wet it was impossible either to confirm or to deny his statement. Up to this time the wound had been dressed with pads of absorbent gauze and wool, but as the fat had become very sloughy the dressing was changed on the tenth day to boric acid fomentations. On the eleventh day the patient sat up in a chair for a short time. The wound having become encrusted with phosphates I tried the effect of soaking the lint in a solution (1 in 20) of acetic acid for a few days but without good results. On the thirteenth day he was sufficiently well to dine off chicken, custard, and fruit. On the twenty-sixth day he passed altogether 15 ounces of urine naturally and on the twenty-eighth day Mr. Bacon passed a soft rubber catheter to assist him. The leakage [illegible] and the urine passed more [illegible] on the fifty-seventh day, a [illegible] A few days before this the bladder had been washed out daily through a catheter and this attention was required now and again afterwards until he was finally sent home on the seventy-fourth day. He is now able to walk about and to retain or to pass his urine as he wishes. He says he feels better than he has for years.

Southampton.

A CASE OF ACUTE EPENDYMITIS IN AN INFANT.

BY J. A. COUTTS, M.B. CANTAB., F.R.C.P. LOND.,
PHYSICIAN TO THE EAST LONDON HOSPITAL FOR CHILDREN.

CASES of primary acute ependymitis leading to the formation of pus in the cerebral ventricles are of such exceptional rarity as to merit that each one should be put on record. Apart from the result of the bursting of a cerebral abscess into their cavities, or as a consequence of suppuration in the sac of a spina bifida, the presence of unmistakeable pus in the cerebral ventricles is a rare occurrence under any conditions. Very occasionally pus in the ventricles is found post mortem in cases of purulent meningitis. Far most frequently, however, the turbid fluid found in even the acutest of these last cases affords no naked-eye appearance of pus, whatever evidence of its purulent character may be forthcoming from microscopical or chemical examinations. The interest in the present case lies in the fact that large masses of pus were found in the ventricles post mortem, without any other lesions being discovered in the meninges or cerebral substance.

Ependymitis as a distinct pathological condition is more frequently dealt with by American writers than by those in this country. References to it, both as an acute and chronic condition, may be found in the works of Delafield and Prudden, Osler, Emmett Holt, and others in America and by Sir William Gowers amongst English authorities. As far as I can gather all these writers treat acute ependymitis from a purely pathological standpoint and merely as a condition discoverable post mortem in connexion with disease of other parts of the brain or its membranes. I know of no instance where an attempt has been made by any writer to connect any symptoms observable during life with the ventricular conditions discovered post mortem. As regards the symptoms arising from the chronic form of ependymitis we perhaps stand on a less uncertain basis. More than 20 years ago, in a graduation thesis at Cambridge, I combated the view that chronic hydrocephalus had any causal origin in rickets and ventured the opinion that possibly an explanation of the former complaint would be found in a primary chronic inflammatory condition of the ventricular ependyma. This view is not inconsistent with the conditions discoverable post mortem and, even if far from satisfactorily established, is, I believe, one very commonly held at the present day.

The difficulty in dealing with the acuter forms of ependymitis lies in the fact that almost invariably the ventricular affection is complicated with other gross lesions of the brain or its membranes and it becomes a matter of impossibility to assign to each separate part its due share in the production of symptoms. In my present case, in the later stages at least, the acute ventricular inflammation was probably the sole disorder and it is no unfair assumption that some of the later symptoms observable during life were directly ascribable to it. As these symptoms, however, were in no sense distinctive or characteristic and varied but little from day to day, I have thought it well briefly to summarise them from the excellent and copious notes of my former house physician, Dr. G. A. Finlayson, now bacteriologist at Singapore.

The patient, a female infant, aged three months, was admitted into the East London Hospital for Children under my care on Nov. 19th, 1902. In the family history of the case there was nothing special to note. The father and mother and two remaining children were healthy. Two children were dead; one had died from pneumonia with measles and the other was found dead in bed. There had been no miscarriages. The patient was a breast-fed infant and had been fairly healthy until the onset of the present illness. This occurred two days before her admission to hospital with diarrhœa and vomiting. The stools, three or four daily, were green and not offensive. The vomiting occurred soon after taking the breast. Early in the morning of the day of admission the infant had a convulsive attack, the arms and legs were held rigid for some time, then twitching occurred in the extremities. The attack lasted about 15 minutes and soon after the child was brought to the hospital. Just before the onset of the fit she seemed to have pain in the abdomen with drawing up of her legs and screaming.

On admission the patient was found to be a small, pale, and rather badly nourished infant. The eyes were bright and the pupils were equal and convergent strabismus was strongly marked. The breathing was irregular both in rhythm and in depth. The pulse varied extremely in force and in rhythm, becoming faster when the breathing was quicker and very slow and almost intermittent when a period of apnœa supervened. There was no definite convulsive attack, but the infant was restless and had irregular spasmodic tremors of the hands. The legs were drawn up on the abdomen and were slightly flexed. Kernig's sign was not present. The knee-jerks were very active—they were brisk and were excited by a very slight tap on the tendon. There was slight retraction of the head but no marked rigidity of the post-cervical muscles. The anterior fontanelle was tense and bulging. The sagittal and frontal sutures were widely open. There was nothing calling for special note in the examination of the chest. The skin was elastic. The tongue was furred. The abdomen was soft and distended. The infant could not take the breast and had to be fed nasally. The temperature on admission was 103° F. but it fell to 101° in the course of a few hours.

The symptoms varied but little till the death of the infant [illegible] as follows. The vomiting [illegible] times a day—generally [illegible] also slight obstinate diarrhœa which continued in spite of treatment until a week before death. After a fortnight in hospital the fits recurred and after this there were few days in which there were not several convulsive attacks. At first these consisted of clonic spasmodic contractions of the left arm and leg and both the mouth and eyes were drawn to the left side. The later attacks were general in character and showed no unilateral tendency. Each fit lasted a considerable time and was ushered in by a shrill scream on the part of the infant. Towards the end they became very frequent. The temperature, which had been 103° on admission, presented from the beginning a marked up-and-down type. At first the maxima attained seldom went much above 101° and on several occasions the temperature dropped temporarily below the normal. Later, when the fits became more numerous, the temperature assumed a higher range and on one or two occasions it went up beyond 104°. The knee-jerks continued exceedingly brisk and a slight tap on the patella tendon would throw the limb into a state of clonic spasm with as many as from 10 to 20 contractions. The head retraction became more marked and the post-cervical muscles more rigid, and towards the end there was considerable opisthotonos. The anterior fontanelle continued very tense and bulging. The day before death an attempt was made to relieve the cerebral tension by drawing off fluid from the ventricles by way of the anterior fontanelle, but this failed owing doubtlessly to the eye of the needle getting blocked by one of the masses of lymph or pus. For the first three weeks the infant remained fairly plump, but before death emaciation became extreme. The total duration of the illness was exactly six weeks.

The following are the notes of the post-mortem examination 18 hours after death, made by Dr. Leonard S. Dudgeon, the pathologist to the hospital :—

> The child was very emaciated. No skin lesions were to be seen or felt. No spina bifida was detected. The pharynx, trachea, lungs, pleura, mediastinal glands, heart, pericardium, and the thymus gland were all found to be healthy to the naked eye. The pulmonary artery was opened *in situ*, but there was no evidence of any ante-mortem clot. The abdominal cavity and its contents, the liver, spleen, kidney, suprarenals, pancreas, stomach, intestines, and glands were all found to be normal. Head.—All the cranial sinuses were normal. There were no abnormal changes in any of the bones of the skull. No middle ear or mastoid disease was noted. Cerebral membranes.—Nothing abnormal was seen to suggest any past or present meningitis. There was extreme flattening of the convolutions. No hæmorrhage or any new growths were seen in any part of the brain substance. There was extreme bulging at the base of the brain in the region of the optic commissure. As soon as the third ventricle was opened a large quantity of thick turbid fluid poured out and also large flakes of lymph and pus. All the ventricles were extremely dilated and contained similar fluid and pus. At the level of the foramen of Magendie there appeared to be complete blocking. There was no dilatation of the central canal of the spinal cord to the naked eye. There was no inflammation of the spinal membranes in the cervical region—in fact, the cord and membranes appeared to be quite normal in this region. An examination of the spinal cord in the dorsal and lumbar region could not be made, but no fluid could be drawn off from the lumbar region of the cord. The fluid from the ventricle was not offensive. The pus was very thick, whitish-green, and very fibrinous. The dilatation of the lateral ventricles was so extreme that the brain tissue only formed a very thin outer wall to the cavities of the ventricles which were extremely dilated in their whole course. There was an extremely thick inflammatory deposit attached to the ependyma of the ventricles which could be scraped off, leaving a rough surface beneath with great dilatation of the veins coursing along the walls of the ventricles. Also a few scattered pinhead hæmorrhages were seen in the walls of the lateral ventricles. Bacteriological examination of the pus from the ventricular cavities.—Cover-slip preparations of the pus showed large numbers of cocci arranged without exception in the form of long chains. Cultures were made on most of the ordinary media. In every case small colonies grew similar in every respect to those of members of the streptococci family. Cover-slip preparations of the pus were made from the growths on the various media and in every specimen examined cocci in the form of very long chains were the characteristic feature. The coccus stained by Gram's method. There was no capsule to be seen to the cocci from the original specimen of the pus. No inoculation experiments were made with the organism. There was no cause discovered for the ventricular infection.

Needless to say the conditions discovered in the ventricles were totally unsuspected before the necropsy. The close similarity of the symptoms to those of meningitis is sufficiently obvious, and during life the case was naturally taken to be one of the post-basic variety of that complaint. That the diagnosis was wrong, as least as regards the variety of any meningitis that may have been temporarily present, is proved by the bacteriological examination, for the organism found was assuredly not the one so commonly associated with the name of Dr. G. F. Still. Whether the streptococcus discovered was a variety of the pneumococcus Dr. Dudgeon prefers to leave unsettled from the data at his disposal. Under this supposition as to the nature of the micro-organism it is, of course, possible that an early pneumococcal meningitis, leading to blocking of the basal foramina, may have at one time existed and cleared up before death. For such an assumption, however, there was absolutely no evidence forthcoming at the post-mortem examination. A more natural and more justifiable conclusion in the circumstances is that, rare as the condition may be, the present case was really one of a primary acute inflammation of the ventricular ependyma. Such an inflammation and its results would be thoroughly compatible with the effects discovered post mortem, and possibly with the symptoms observable during life. As has been said, these symptoms were in the main those of a post-basal meningitis. On the severity and time of appearance of one or two of the symptoms some stress may, perhaps, be laid as lending aid in distinguishing between the two conditions. In the present case the onset was more acute and the fits were much more frequent and persistent than in an ordinary case of post-basic meningitis. The temperature, too, towards the end of the third week began to rise, whilst in most cases of post-basic meningitis it would by that time have reached the normal or fallen below it. One other point seems worthy of some special notice. In a sick infant aged three months only the degree of consciousness present is hard to estimate. The fact, however, that from the moment of her admission to the hospital the infant had lost the power of sucking and had to be fed nasally is strong presumptive evidence that the amount of consciousness appropriate to the age of the child was already in entire abeyance. So early a loss of consciousness, in less than two days from the onset of the illness, is a rare occurrence in any form of meningitis. On the failure to elicit Kernig's sign I would personally place but little weight. The inability to draw off fluid from the ventricle, where one was fairly certain the point of the needle was within that cavity, ought, perhaps, to have led to the conclusion that the case was not an ordinary one of post-basic meningitis, but deductions drawn from such a procedure hardly enter into the domains of practical diagnosis.

The main features of acute ependymitis in infants, as far as one is justified in attempting to settle them from a single case, would seem to be acute onset with vomiting, a persistent temperature of the hectic type rising towards the end of the illness, very early loss of consciousness, very frequent fits dating almost from the onset, and early and persistent bulging of the anterior fontanelle, along with convergent strabismus. I much fear, however, that at the present time the differential diagnosis between such cases and those of meningitis is practically impossible, especially when it is remembered how widely cases of the last disorder vary as regards the prominence and times of appearance of their numerous symptoms.

In conclusion, I have to acknowledge my indebtedness to Dr. Dudgeon, not only for the care which he bestowed on the post-mortem and bacteriological examinations, but for several references to the literature of acute ependymitis that I should otherwise have missed.

Upper Berkeley-street, W.

A CASE OF DROPSY, THE RESULT OF INFLAMMATION OF THE KIDNEYS, TREATED BY LAPAROTOMY.

By HENRY PAUL PLANER, M.D.

In the following article I wish to draw the attention of my fellow physicians to a case of dropsy resulting from inflammation of the kidneys, completely relieved by laparotomy and the treatment following the operation—a case of so much interest that it seems to me to be worthy of publication.

On March 12th, 1902, the patient, aged 31½ years, was admitted to my private hospital after having been unsuccessfully tapped at another hospital, from which she was dismissed as incurable on March 7th, 1902, with the prognosis of her speedy decease. Her condition on admission was as follows. She was very anæmic and had almost a bilious complexion; the lungs were healthy, the heart was not enlarged, and the heart-beats were clear. The liver reached far beyond the right arch of the ribs and was very much enlarged. The spleen was three fingers' breadth beyond the usual limit and painful to touch. The kidneys, according to external percussion and palpation, were enlarged and sensitive to touch. The uterus was somewhat small and moderately retroverted. Menstruation was said not to have appeared for five months. The urine was very albuminous; it was free from sugar. The body was enormously swollen and in a state of advanced ascites. As I was convinced that the patient was suffering from dropsy arising from inflammation of the kidneys, accompanied with rather severe albuminuria, I decided to let off the fluid by means of laparotomy. Under the influence of chloroform at first and later of ether I made a long incision in the abdomen, introducing at the same time into the two breasts, by means of two capillary tubes, a solution of tepid salt water with a small quantity of sodium bicarbonate. During the whole operation the anæsthesia was not interrupted in any way, nor was the action of the heart enfeebled, which was mainly owing to the introduction of the salt water into the system. After opening the abdomen and letting an immense quantity of water rush out I found the liver, spleen, and kidneys very swollen and in a state of extreme hyperæmic inflammation; the suprarenal capsules, uterus, and ovaries were in a natural state; the parametrium and perimetrium, as well as the general peritoneum, were free from any inflammatory matter. After having removed from each side of the incision wound (which was 18 centimetres long) a strip (15 centimetres broad and 40 centimetres long) of the very much expanded peritoneum I united the remaining edges of the peritoneum with a row of catgut stitches to which I joined the muscles and fasciæ and then closed the abdomen with 12 silk stitches. On the fourth day after the operation and every following day until the *forty-second* the patient received on an empty stomach a pill containing gamboge, while the diet was light and free from fat and albumin. This removed the congestion of the liver, spleen, and kidneys, and it became evident that the patient's bilious complexion was giving place to a fresher colour. The motions of the bowels were also regular and spontaneous after medication ceased, whereas they had before been very constipated. The secretion of urine, which had been very scanty and albuminous before the operation, was now plentiful and showed no trace of albumin. On the fifteenth day after the operation the external silk threads could be removed and a week later, on April 2nd, the patient was able to leave the hospital completely cured and without a trace of ascites in her body. For over nine months she has enjoyed perfect health and needs no further medical treatment. At the last examination of the patient, which took place two months ago, I found the abdomen soft, the liver non-resistant, the spleen in a normal condition, the wound well healed (*without hernia of the bowels*), the *urine free from* albumin, the motions daily and spontaneous, and the general health good. The patient informed me that she had accomplished a walk of about ten English miles in three hours when carrying a heavy weight without any inconvenience whatever. I must not omit to mention that six weeks after the operation menstruation caused severe pain, in consequence of which I undertook a slight dilatation of the cervix uteri and after this it came on regularly and painlessly.

From the success of the preceding case I arrived at the conclusion that by the operation of laparotomy the dis- [illegible] greatly relieved, that the [illegible] permanent relief from [illegible] patient was due entirely to the operation of laparotomy, whereas the tapping of the abdomen practised previously by other hands was altogether without effect. It would be interesting to learn whether the same experience has been met with in similar cases in other hospitals. This example tends to show at all events that laparotomy is to be preferred to tapping or puncture in cases of severe ascites.

Dresden.

PRESENTATIONS TO MEDICAL PRACTITIONERS.—Mr. G. Gardner Oakley, M.R.C.S. Eng., L.R.C.P. Lond., of Halifax, has recently been the recipient of a case of pipes from the members of a men's ambulance class whom he has instructed in first aid.—Mr. John Twiname Gardner, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., the chairman of the Ilfracombe band committee, was presented on April 1st, at the last fortnightly concert which he had arranged during the winter months, with a silver cigarette, match, and sovereign combination case and an illuminated address containing the names of 130 subscribers and recording the appreciation of his efforts in providing during the past winter high-class concerts which had been greatly enjoyed by the residents and the visitors.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF NASAL CALCULUS WEIGHING 48 GRAINS.

BY A. J. HELM MONTAGUE, M.D. DURH., L.R.C.P. LOND., M.R.C.S. ENG.,
SURGEON TO THE WORKSOP VICTORIA HOSPITAL;
AND
RICHARD LAKE, F.R.C.S. ENG.,
SURGEON, ROYAL EAR HOSPITAL.

A MARRIED woman, aged 36 years, was seen by Mr. R. Lake, in conjunction with Dr. A. J. H. Montague, on August 4th, 1902. She complained of an offensive discharge from the left nostril, a disagreeable taste in the mouth, and inability to breathe through the nose. The above symptoms had existed for five years. On examination a large calculus was found firmly imbedded in the left nasal cavity. Mr. Lake removed it with forceps, under cocaine, with much difficulty. The calculus weighed 48 grains. The outer crust consisted of earthy carbonates and phosphates and the nucleus consisted of a cherry-stone which when crushed revealed the kernel intact. The patient was given an antiseptic nasal douche and on August 23rd all symptoms had disappeared and she was able to breathe normally through the nose.

Remarks by DR. MONTAGUE.—The points of interest in the case appear to be, firstly, the size of the calculus; and secondly, the fact that the patient had no symptoms until five years ago and that she had no idea how the cherry-stone got up her nose. On careful inquiry it was elicited from the patient that she *distinctly remembered*, when a small child, living in a house in the country to which was attached an orchard containing several cherry trees. Doubtless one of her playmates, or she herself, pushed the stone up her nostril, the stone remaining quiescent for many years.

NOTE ON A CASE OF MACROPODIA.

BY DR. R. KUTSCHERSKY.

(*Translated for* THE LANCET.)

THE patient in this case is a beggar-woman who is 60 years of age and has an abnormal development of the right foot. Not much information as to her past history can be obtained from her; she says that she was born with her foot in this condition, that it grew with her growth, and that there never have been any instances of malformation in her family. Her body is in other respects well developed; her muscles are of average strength; the subcutaneous fat is scanty. Her height is 163½ centimetres (5 feet 5 inches); on several parts of her body there are small cutaneous ulcers of unknown origin and not attended with pain; in other respects her body presents nothing abnormal. The right foot is considerably larger than the left one and makes with the leg a much greater angle than the left foot does; its anterior half is strongly curved, so that the toes do not touch the ground but point upwards. The conformation of the toes at once attracts attention, especially that of the great toe and the second and third toes; they are enormously large and thick, strongly curved upwards, and extremely divergent from one another. These three toes are ankylosed in all [illegible] they are not capable of either active or [illegible]; whatever is to be [illegible] the second toe are simply extended upwards in a marked degree, whilst the third toe is dislocated upwards and backwards; the two other toes (the fourth and fifth) are hardly noticeable where they project from under the third one and by contrast they seem to be smaller than normal. The toe-nails are proportionately enlarged without any anomalous feature. The following measurements were taken: the length from the heel to the extremity of the second toe is 30 centimetres (11·8 inches) in the right foot and 24 centimetres in the left one.

The circumference of the right foot at the root of the toes is 34 centimetres, while that of the left one is 25 centimetres. The circumference of the right great toe at its root is 13½ centimetres, that of the left one being eight and a half centimetres. The distance between the great toe and the second toe of the right foot is 16 centimetres at their extremities and three centimetres at their roots. The woman has no paresis or disorder of sensibility or other anomalous condition of the nervous system; neither has she any functional disorder of the internal organs.

Elisabethgrad, Russia.

GUNSHOT INJURY TO THE LEG FOLLOWED BY ALBUMOSURIA.

BY C. E. CAMPBELL-HORSFALL, M.B., CH.B. VICT.,

LATE HOUSE PHYSICIAN TO THE LEEDS GENERAL INFIRMARY AND HOUSE SURGEON TO THE CHILDREN'S HOSPITAL, LEEDS.

THE patient, a working man, was accidentally shot in the leg below the knee, the injury being so severe as to necessitate immediate amputation. He had lost a considerable quantity of blood previously to his admission to the Clevedon Cottage Hospital and was profoundly collapsed after the operation. He rallied, however, and made an uneventful recovery. The urine was not examined on admission. Two days later it was found to contain a large quantity of albumose On boiling the urine, previously acidified, a copious precipitate was thrown down which entirely disappeared on further heating, reappearing on cooling again. On applying Heller's test a dense white cloud formed some distance above the line of contact of the two fluids. This cloud entirely dissolved on heating but it reappeared on cooling. This condition lasted several days, the albumose growing less each day until it entirely disappeared, and it has not since returned.

The clinical significance of albumose in the urine is at present imperfectly understood. It occurs in many conditions and is found most frequently where destructive tissue changes are taking place under the influence of micro-organisms—e.g., infective diseases, pus formation, &c. It is also found in cases of Bright's disease, pregnancy, and insanity. It occurs abundantly in the condition known as myelopathic albumosuria, sometimes appearing in the urine as a thick white deposit. In this condition it is dependent on sarcomatous degeneration of the bone marrow and is, of course, of fatal significance.

Clevedon, Somerset.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. v., Prooemium.

GREAT NORTHERN CENTRAL HOSPITAL.

A CASE OF SUPPURATING HYDATID CYST OF THE LIVER WITH GALL-STONES IN THE GALL-BLADDER, THE SYMPTOMS SIMULATING THOSE OF BILIARY COLIC.

(Under the care of Dr. H. W. SYERS.)

THE patient, a married woman 37 years of age, was admitted into the Great Northern Central Hospital on August 20th, 1902, under the care of Dr. H. W. Syers. With the exception of the occasional passage of tapeworm during the last 12 years (no such passage having occurred during the last two and a half years) the patient stated that she had always been in good health until early in the year. Then, without apparent cause, she first complained of pain after food and epigastric tenderness. For these symptoms she sought relief at a hospital, being admitted and remaining as an in-patient for 14 days, the illness being regarded, according to the patient's statement, as gastric ulcer. There was no jaundice at this period. She afterwards attended as an out-patient at the same hospital during the next four months. The diagnosis which was made appears to have been "gastritis" and she was treated with aperients and bitters with alkalies. A month before admission to the Great Northern Central Hospital she began to suffer with severe attacks of abdominal pain accompanied with occasional vomiting. A fortnight before admission jaundice was first noticed and affected the whole body. There was severe pain in the right hypochondriac region and there was an account of a swelling in this region which came and went, being also very painful. It seems that the pain was always severe during the time that the swelling was in process of evolution and during its continuance, but that the latter was of short duration and that with the disappearance of the swelling the pain vanished. The family history was not material. The patient had borne two children, one of whom had died five years before from "fits" at two years of age, while the other was living and healthy.

On admission the patient was found to be thin and delicate in appearance. She lay in bed on her back and was breathing rather rapidly. There was distinct jaundice affecting both skin and conjunctiva. The lungs and heart were healthy. The abdomen was somewhat tense and there was marked tenderness on pressure below the right costal margin. The tenderness was particularly evident over the junction of the tenth costal cartilage. In the right hypochondrium just below the costal arch a mass could be felt which appeared to be the distended gall-bladder, but no definite increase of size on the part of the liver itself could be made out. The urine was bile-stained but there was no albumin. On the next day the tenderness in the hepatic region was less marked; the jaundice, too, was not so evident and there was some bile in the evacuations. The temperature, which had been 101·8° F. on and after admission, remained more or less elevated until the 26th, when it fell to the normal. The jaundice had now greatly lessened and there was practically no pain in the hepatic region. On the next day, however, the condition of the patient was as bad as ever. The temperature rose and on the 27th it was 102·4°. On this day a very definite swelling appeared in the region of the gall-bladder; this swelling was extremely tender and painful, but the next morning it disappeared, leaving the patient much more comfortable. With the disappearance of the swelling the temperature again fell to the normal and remained normal until the 29th. During these two days the condition again greatly improved, the jaundice becoming much less marked and the pain in the right hypochondrium disappearing. On the morning of the 29th a relapse occurred. The patient had slept well the previous night and was fairly comfortable all the morning. At 1 P.M. she was suddenly seized with severe pain in the hepatic region which continued all the afternoon. There was some nausea but no actual sickness. At 3.30 P.M. she stated that she felt the ' lump coming." At 6 P.M. a definite rounded elastic swelling of the size of an orange was felt beneath the abdominal wall about three fingers' breadth below the costal margin; it was acutely tender on pressure. On the next morning the lump had entirely disappeared, the temperature had fallen to the normal, and the patient was very comfortable. On this day Mr. E. C. Stabb saw the case with Dr. Syers and it was decided to operate.

The operation was performed on the next day (Sept. 1st). A vertical incision was made just below the ninth rib in the right semilunar line and the abdominal cavity was opened. The gall-bladder, of natural size, was found just beneath the wound; in it were found three gall-stones which were loose and easily moveable in the bladder. The three gall-stones were so faceted as to form together a sausage-shaped mass about one and a half inches long by half an inch in diameter. These were the only gall-stones that were felt and nothing else which was likely to obstruct the passage of bile could be detected. The head of the pancreas could be felt and was apparently normal. A chain of enlarged glands extended along the course of the common bile-duct. The liver was apparently normal in size; the lower margin was sharply defined and on a level with the costal margin. No soft spot or bulging could anywhere be detected. In the region of the gall-bladder the anterior surface of the liver was firmly adherent to the overlying costal cartilages by much firm fibrous tissue, evidently of old standing and inflammatory in origin. The under surface of the liver appeared to be absolutely normal.

A small incision was made through the fundus of the gall-bladder and the stones were removed. The wound was closed by means of a few stitches in the mucous membrane and a double row of Lembert's sutures externally. The abdominal incision was then closed with fishing-gut and superficial horse-hair sutures. On the next day the temperature was normal and the patient on the whole was fairly comfortable. There was slight pain in the right hypochondrium and she vomited, but not severely, once or twice. The bowels were opened by means of enemata and the vomiting did not recur. The condition continued fairly satisfactory; the sutures were removed at the end of a week, the wound having completely healed by first intention. On the 8th the temperature had again risen slightly; there was now marked tenderness over the epigastrium and the vomiting recommenced, the temperature rising to 102°. She remained in much the same condition until the 18th, when a distinct change for the worse took place. Marked and general jaundice now appeared and vomiting again became troublesome. The temperature was still 102° and severe pain in the left lateral region of the chest was complained of. On physical examination there was found to be acute dry pleurisy in this locality. There were also much pain and tenderness in the right hypochondrium and in the epigastrium. No improvement occurred during the next few days. Pleural friction sounds were clearly audible over the left lateral region and great pain was complained of in this locality. On the 16th it became obvious that the patient was suffering from acute peritonitis; the jaundice persisted, the temperature remained high, and the vomiting was uncontrollable. She died on the 18th, all the symptoms of acute general peritonitis being well marked and deep jaundice being present at the time of death.

Necropsy.—The post-mortem examination was made the day after death. The body was universally and somewhat deeply jaundiced and was also greatly emaciated. On opening the abdominal cavity acute purulent peritonitis was found to be present; the intestines were greatly distended with gas and were covered with recent lymph at numerous points at which they came into contact with one another. The peritonitis was most intense in the upper half of the abdominal cavity and especially in the right hypochondrium. It was found that an abscess had burst through the lower surface of the liver in the neighbourhood of the transverse fissure and that the extravasation of its contents had set up an acute purulent peritonitis. On removal of the liver the whole central portion of the organ proved to be the seat of an enormous hydatid cyst, the contents of which had suppurated. The cyst lay beneath the dome-shaped surface of the liver and was separated from the diaphragm, to which the liver was strongly adherent, by not more than an inch thickness of healthy hepatic tissue. The cyst was fully six inches in diameter and was situated quite two inches from the front of the liver. It contained large numbers of daughter cysts. In the course of the extension of the hydatid cyst an opening had resulted into the common bile duct, through which the contents of the cyst could escape into the duodenum.

Remarks by DR. SYERS.—The diagnosis in this case was by no means easy or straightforward. The severe paroxysmal pain from which the patient suffered taken in connexion with the attacks of jaundice which certainly seemed to be more or less consecutive to the paroxysms of pain, together with the periodical swelling which occurred in the neighbourhood of the gall-bladder, led to the suspicion that the case was one of gall-stone colic, and as at the operation gall-stones were actually found it seemed that the case was clearly explained and no further interference was deemed necessary. Indeed, the condition of the patient previously to the operation was very far from satisfactory and it would not have been advisable in any circumstances to have prolonged the operation. It may be safely assumed that the periodical swelling which occurred below the right costal margin was due to distension of the gall-bladder. As regards the persistent jaundice, it may remain an open question as to whether this was the result of impaction of gall-stones or whether it may not have been due to a blocking of the bile-ducts by the inspissated contents of the hydatid cyst. For some days after the operation the state of the patient was so satisfactory as to render it probable that the removal of the gall-stones had effected a cure, but the appearance of severe symptoms at a later stage rendered it obvious that some deeper-seated lesion was present. The rapid increase in the severity of these symptoms precluded the possibility of further operative interference and it is certainly a question whether in any circumstances an abscess situated in the very centre of the liver could have been successfully treated by incision and drainage from behind. The risk of injury to the base of the right lung would have been very great and the discharge of the contents of the suppurating hydatid cyst into the right pleural cavity would also very probably have occurred. The cases in which the abscess points externally and presents from the upper or under surface of the liver are totally different and are far more easily diagnosed and surgically treated.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

The Action on Bacteria of Electrical Currents (or Discharges) of High Potential and Rapid Frequency.—A Further Note on a Case of Multiple Granulomata caused by a Higher Mould Fungus.—A Case of Streptothrix Infection.—The Influence of Salts on the Action of Immune Hæmolysins.—Note on the Serum Reaction of Tubercle

A MEETING of this society was held on April 21st, Dr. E. E. KLEIN, F.R.S., the Vice-President, being in the chair.

Mr. ALEXANDER G. R. FOULERTON and Dr. A. M. KELLAS communicated a paper on the Action on Bacteria of Electrical Discharges of High Potential and Rapid Frequency, in continuance of a communication on the same subject which they made at a laboratory meeting of the society last year. In the former communication they had given the results of their earlier experiments, which showed that by discharging the current close to the surface of a fluid containing bacteria, held in a test-tube through the bottom of which a platinum wire had been sealed, it was possible to destroy the organisms suspended in the emulsion. The organisms tested in this way were bacillus typhosus, bacillus coli communis, bacillus dysenteriæ (Flexner), bacillus anthracis (sporing and non-sporing cultures), bacillus pyocyaneus, bacillus prodigiosus, staphylococcus pyogenes aureus, and streptococcus pyogenes. The emulsions were made either by mixing bacterial growth from a solid medium
with distill
culture to
of from 2 5 to 5 ampères, the voltage varied from 35 down to 24, and the experiments were carried out in an atmosphere of common air. Sterilisation of the bacterial emulsion occurred after exposure to the discharges of from 10 to 20 minutes' duration, varying apparently with the intensity of the current employed. Further experiments had now been carried out to determine the precise cause of the sterilisation, and it was found that if the experiments were carried out in an atmosphere of hydrogen instead of in one of common air the bacteria would survive an exposure to the discharges of at least one and a half hours, beyond which time their experiments had not at present extended. It had also been found that the bacteria remained unaffected when the discharge was sprayed in an atmosphere of hydrogen over the surface of a growth in a sloped agar tube, through the bottom of which a platinum wire was sealed as before. Further, it was found that when such currents were discharged over the surface of water in an atmosphere of common air under the condition of the previous experiments there was a rapid development of acidity in the fluid, due to the formation of nitrous and nitric acids from nitrogen peroxide formed by the discharge of the current in the air. The nitrous acid was, under the conditions of the experiments, rapidly changed to nitric acid; and it was to the latter that the germicidal action must be mainly attributed. Nitrogen peroxide being formed in the air as the result of the electrical discharge, the latter when it took place at the surface of the fluid seemed to favour the solution of the gas, to carry it down into the fluid as it were; and it was possible that with the discharge of such currents over the skin a somewhat similar penetration of the chemical products might occur. In any case it seemed probable that the discharged current had very little direct action on bacteria with exposures of moderate duration, and the useful effect of the discharge of current in certain conditions when ulceration was present must be taken as being due, at any rate

to the germicidal action of chemical decomposition products formed in the air. And it was possible that in morbid conditions, not apparently caused by parasitic infection, the favourable results sometimes observed might be in part due to the action of nascent and active nitrogen compounds penetrating the tissues in minute quantities. And, as already stated, it was not unlikely that the electrical discharge on the surface might favour the penetration of the skin by such bodies. Experiments in which the currents were sprayed over the bacteria in an atmosphere of carbonic acid had also been carried out, but the results were somewhat contradictory and further experiments were necessary.—Dr. KLEIN pointed out that although Mr. Foulerton and Dr. Kellas came to the conclusion that the bactericidal power of the electrical discharges was due to chemical change and not to the direct effect of the current, yet they had not explained why certain organisms which had a considerable resisting power to chemical disinfectants were killed as readily as those with a lesser resisting power.—Mr. FOULERTON, in reply, said that tubes containing various organisms had been exposed to the electrical discharges for periods of five, ten, 15, or 20 minutes. One growth might be killed by exposure for just over 15 minutes, while another growth might not be killed till nearly 20 minutes' exposure; in the present series of investigations no account had been taken of these differences and therefore he thought that the inconsistencies referred to by Dr. Klein were more apparent than real.

Dr. W. S. LAZARUS-BARLOW referred to a case of Multiple Granulomata which he had described at the meeting of the society on Jan. 20th of the present year and said that further events had shown that the fungus which he had suggested might be the cause of the disease was not so in reality. He had suggested that the cause of the multiple granulomatous tumours was a hyphomycetous mould which he had obtained in pure culture. Since then the man had returned to hospital with fresh abscesses from which had been isolated a streptothrix identical with one isolated by Mr. Foulerton in a somewhat similar case. It was this latter which must undoubtedly be looked upon as the cause of the condition particularly as it corresponded with masses of the organism that were actually present in the tissues.

Dr. W. D'ESTE EMERY showed Specimens and Cultures from a case of Streptothrix Infection under the care of Mr. A. B. Barrow in King's College Hospital. The patient was a woman who resided in the country. The infection apparently occurred through a carious tooth which was removed. This led to no relief and after a time numerous sinuses formed in the skin in the region of the lower jaw, face, temporal region, and upper portion of the chest; the tissues in this region were hard and infiltrated and the skin was reddened. The pus contained typical nodules of streptothrix. Little improvement took place when the patient was treated with large doses of iodide of potassium, but when this was supplemented by incisions and scraping of the sinuses rapid amelioration occurred. Cultures were obtained and the organism was found to grow on all ordinary media at blood heat in the form of small, discrete, opaque, white colonies. They grew best on potato. The growth on blood serum resembled small pearls and the medium was not liquefied. The organism grew both in the presence and absence of oxygen and apparently slightly better in its absence. In anaerobic cultures typical "chain sporulation" occurred and the mycelium often showed terminal clubs, sometimes of very large size. In aerobic cultures the organism occurred almost entirely in the form of straight bacilli, mycelia being very scanty or entirely absent. Dr. Emery considered that these bacilli multiplied by simple transverse fission without the intervention of a mycelial stage.—Mr. FOULERTON said that when dealing with a quickly growing organism it was easy to trace the various steps of development, whereas when the organism was slow-growing the various stages merged into one another.

Dr. W. BULLOCH described experiments on the Influence of Salts on the Action of Immune Hæmolysins. He showed by a new method of preparing the stromata of the red blood corpuscles that the formation of hæmolysins was referable to the nucleo-proteid, as stromata which have been extracted with ether were incapable of developing hæmolytic sera. Certain salts, such as sulphate, bromide and chloride of magnesium, zinc sulphate, and ammonium sulphate, were capable of completely inhibiting the hæmolytic effect of potent immune sera. By analytical experiments with special reference to magnesium sulphate it was shown that this was due to the salt preventing the junction of the complement with the immune body and not due to the destruction of either of the components of the hæmolysin.

Dr. A. E. WRIGHT described the technique for preparing the fluid to be used in the Serum Reaction of Tubercle. He said that to prepare the fluid tubercle bacilli were ground up in an agate mortar with salt. This was then mixed with water and the mixture centrifuged, when an opalescent fluid remained. When this was brought into contact with a specific serum a sedimentative reaction set in. He next dealt with the forces which caused the sedimentation and suggested that the force was an electric one and acted on the particles, causing them to form into definite groups. The blood serum of tuberculous patients tested in this manner showed no more reaction than the normal blood and Dr. Wright did not consider that the reaction could be of diagnostic value. After tuberculin inoculation a reaction was produced, and by repeated inoculation a cumulative effect was obtained which could be estimated by means of this sedimentation test.

SOCIETY OF ANÆSTHETISTS.

Discussion on Somnoform.—Election of Officers.

A MEETING of this society was held on April 3rd, Mr. WALTER TYRRELL, the President, being in the chair.

Mr. W. FOSTER CROSS read a paper on Somnoform. He said: I have been asked to occupy your time for a few minutes this evening in opening the discussion. I shall not make a great demand on your patience. This anæsthetic on which I wish to speak was first introduced to the public just about a year ago under the name of "somnoform." In May of last year Dr. Rolland and Mr. F. Field Robinson communicated a paper to the British Dental Congress at Shrewsbury upon a new mixture which they had been using as a general anæsthetic. This mixture was composed of the following ingredients: ethyl chloride, 60 parts; methyl chloride, 35 parts; and ethyl bromide, five parts. The following points were claimed in its favour: (1) that all bulky apparatus was dispensed with, all that was necessary being a flask containing the mixture about six inches in depth and holding about 50 cubic centimetres and a face-piece in the form of a cone upon which to administer it; (2) its rapidity in effecting anæsthesia; (3) its rapid elimination; (4) the absence of any untoward effects both during and after administration; and (5) its absolute safety. What struck me most when reading their paper was the statement that anæsthesia could be obtained in 20 seconds and with absolute safety, that no after-effects such as vomiting occurred, and, further, that not only had they used it in minor surgical operations, but in such major operations as removal of the kidney, &c. Now it seemed to me that if these claims were well founded it would be an ideal anæsthetic in busy hospital practice, so I determined to try it and naturally began with some trivial operations, such as extraction of teeth. From these I proceeded to those of greater duration. Now before giving my experience, which I must say is very limited, as I have used somnoform in only about 160 cases, a large proportion of which were those of extraction of teeth, let me first say a word or two upon the method of administration as described by Dr. Rolland. He says that about five cubic centimetres are to be sprayed upon the inner surface of the mask, which is then to be rapidly applied to the face of the patient so as to exclude all air; the patient is then told to breathe. Anæsthesia will then, it is said, be obtained in about 20 seconds, when the eyes become fixed and the arm raised will remain in a cataleptic state or drop owing to muscular relaxation. In administering this anæsthetic I adhered as closely as possible to the rules laid down by Dr. Rolland. I will now pass on to say a few words on the symptoms which I observed. The evident feeling of suffocation and the consequent gasping for breath were much more marked than in any other anæsthetic. This is no doubt due to the almost complete exclusion of air and although this symptom lasts for only a few seconds it is a distressing and disconcerting one and the consequence is that there is a great tendency on the part of the patient to pull away the mask, a tendency which, of course, has to be restrained. So much so did I find this to be the case that I took to administering it through an ordinary celluloid face-piece with the hole at the top lightly plugged with lint. By this means the *struggling was lessened and swallowing movements* which otherwise took place did not occur. As regards the time occupied in rendering patients insensible, I found that it varied as to whether air was excluded or not. In the former case, notwithstanding the attempted resistance *on the part of the patient, anæsthesia was frequently* induced in as little as 20 seconds, the time mentioned by Dr. Rolland. In the latter case about 60 seconds elapsed before anæsthesia was complete, but if free admixture of air was allowed it was difficult to effect true anæsthesia at all and only a condition of analgesia was obtained. Now at first sight I confess that it appeared somewhat difficult to say at what moment the patient was ready for operation, but after administration in a few cases and more or less determining how much air to admit I found that the patient soon settled down and presented the following phenomena. The face in all cases at first became flushed and cyanosis was never observed, except in two *instances which I shall presently mention. The breathing,* which at first was irregular, within a very few seconds became steady, slow, deep, and regular, much the same as occurs in chloroform anæsthesia. The eyes were suffused and had a fixed stare; the pupils which at first were widely dilated within, as a rule, less than a minute became contracted and remained so throughout the administration, with *also loss of conjunctival* and corneal reflexes. The pulse always became rapid at first but soon settled down and became regular, although somewhat increased in frequency throughout the operation. As regards muscular relaxation, in some cases it was perfect, whereas in others this was not so. As an instance of the latter I may mention the case of a boy to whom I administered somnoform for 15 minutes for amputation of the finger and although apparently anæsthetised he was yet constantly moving his fingers on the hand operated on, though there was no movement elsewhere. These movements still occurred even when the administration of somnoform was increased. Afterwards he told me that he felt as if someone was gnawing at his finger, *although the imaginary gnawing gave him no pain. Hence* it seems to me that somnoform cannot be relied upon as a satisfactory anæsthetic where complete muscular relaxation is imperative. I am bound, however, to say that the absence of complete relaxation may possibly have been due to faulty administration, but I must add that this is far from being the only case in which similar symptoms were observed. On the other hand, *I have given somnoform for operations on* particularly sensitive organs with no such symptoms occurring. Now Dr. Rolland claims that anæsthesia may be obtained for as long as five minutes from a single administration. I cannot say that from a single administration I have ever obtained an anæsthesia with a duration of more than 80 seconds, although this is as long again as that obtained from nitrous oxide. But as regards dental practice I do think that it possesses these advantages over nitrous oxide: that not only is the anæsthesia as a rule longer but there is absence of cyanosis and jactitation and that on the whole the patient is quieter. This result of course may be obtained equally as well by the combination of nitrous oxide *and oxygen, and when questioning patients afterwards* who on previous occasions had been subjected to gas, they almost *unanimously told me that they much preferred that* anæsthetic to somnoform. It is further said that dieting is immaterial as no vomiting occurs, also that the position and clothing of the patient are of minor importance, but in answer to these claims I must say that I consider *that dieting ought not to be disregarded any more than* in any other anæsthetic. In three of my cases there has been vomiting; in two of these the stomach was full of solid food and I must say that at first I was somewhat alarmed as during anæsthesia these patients suddenly became pale, with profuse sweating and shallow breathing and with the pulse rapid and very feeble, and then the contents of the stomach were expelled. In another case that I know of, although not within my personal experience, where somnoform was given for dental extraction, the patient vomited occasionally for several hours afterwards; and in another case which I was told of—that of a woman, aged 30 years, to whom it was also given for dental extraction—fainting occurred and the patient remained in a collapsed condition for over an hour. As to its absolute safety happily I can say nothing to the contrary with certainty, but I have notes of two cases in which there were indications of a condition that might possibly have led to fatal results. In both of these cases there occurred *during the administration very marked general rigidity,* with arching of the back, spasm of the muscles of the jaw, and some degree of cyanosis with the pupils widely dilated. It is true that these symptoms were overcome by allowing the patient to have a few breaths of air, and I do not therefore desire to *lay too much stress upon them; but I think it* right to mention this in connexion with the claim that by no possibility can somnoform anæsthesia result fatally. As to the return of consciousness being immediate, I cannot say that this was invariably the case, although it was so in the majority of instances. In one case, that of a child who was operated on for circumcision, six minutes elapsed before conciousness returned, and in another case, that of a boy who was "under" for ten minutes for the extraction of a bullet from the thigh, recovery took as *long as 30 minutes. Moreover, it is to the disadvantage* of somnoform that it has a very disagreeable odour, due, it is said, to the presence of bromide of ethyl. Somnoform is *also, I believe, very liable to decomposition and when kept* for any length of time it loses its efficiency and becomes of a yellowish-brown colour, owing, I understand, to free bromine being given off. I must say a few words about the cost of somnoform. The cheapest price at which it can be obtained is, I believe, 6*s.* per bottle, and this is said to contain enough to anæsthetise from eight to ten *patients, so that this works out at very much more* than the cost of chloroform or ether, with results in my experience not nearly so perfect. On the whole I have come to the conclusion that somnoform possesses few, if any, advantages over the ordinary anæsthetics in daily use, besides *having the particular disadvantages which I have attempted* to indicate. I am not disposed, therefore, to advocate its use. However, as I have already said, my experience of this anæsthetic has been but very limited and I shall be very glad to have the advantage of listening to the remarks of anyone who has had the opportunity of making a greater use of it than I have enjoyed.

The PRESIDENT, after proposing a vote of thanks to Mr. *Foster Cross for his interesting paper, said that personally he* had no experience with somnoform and had never given it. It was certainly not, as far as he could judge, going to take the place of gas. With regard to vomiting, it compared very badly with nitrous oxide, under the administration of which only about 1 in 1000 had vomiting.

Dr. R. H. J. SWAN said that he had used somnoform in *the dental department at Guy's Hospital on about 500* patients. He had used a cornet-shaped mask and had the same results to record as had been described by Mr. Cross—i.e., vomiting and struggling—but had soon come to the conclusion that the mask was an unsatisfactory thing and had used since a celluloid mask with lint inside so as partially to block the holes and to which was attached a Clover's bag; with this he had given somnoform with excellent results. As a sign of anæ[illegible] relaxation of muscular power wa[illegible] was difficult to go on with [illegible]wing whether the patient was [illegible] He found that the best plan was to ask the patient to look at his (Dr. Swan's) finger which he kept moving backwards and forwards in front of the patient's face. In about from 15 to 18 seconds the eyes became fixed, the breathing deeper, and anæsthesia quickly followed. He had produced anæsthesia in some cases in from 90 to 100 seconds, in others in from 35 to 40 seconds. Recovery was not rapid; the patient was very quiet. In few cases was there muscular rigidity. He *had used somnoform for operations* on tonsils, *for adenoids,* [illegible] ence it was unsatisfactory. With regard to cost as compared with that of gas, when giving somnoform with a closed celluloid mask he found the dose recommended, five cubic *centimetres,* [illegible] that a bottle [illegible] was about th[illegible] somnoform [illegible] drug cost rather *more,* but the anæsthesia produced was about twice as long as that of gas, so here there was a saving, as patients did not come round too soon and require a second *administration,* which was often the case with gas. As to the unpleasant smell, this was not very bad, as several patients he had had preferred somnoform to gas. He found that if the patients were prepared beforehand for the disagreeable odour they would take it easily and not complain of a feeling of suffocation which was often experienced under gas. He had not had much struggling except in cases of young children. Dr. Swan then gave some results of experiments upon animals with the drug, it having been given to a cat for over eight hours, at the end of which it was purposely killed. In the case of both dogs and rabbits it was found that the respiratory movements ceased before the cardiac movements. The blood was noted before and after anæsthesia and no change was found in the quantity of hæmoglobin or the white corpuscles. As to the future use of somnoform Dr. Swan thought that it ought to be restricted to short operations and should be given in an inhaler with a bag attached. He had had only one case which gave rise to anxiety, that of a little boy, aged seven years, who was under somnoform for 20 minutes, 18 cubic centimetres being given. When taken back to bed he was in a collapsed state and remained so for six hours. Dr. Rolland had informed him that he had had two bad cases, one being that of a woman, aged 32 years, with whom he had used the cone and induced anæsthesia for 20 minutes. She had had continual fainting and swoons for some time after. The other case was that of a child operated on for adenoids, 10 cubic centimetres being given with similar results. In conclusion he thought that somnoform should have a further trial.

Mr. Edgar Willett said that he would like to make a few observations about some cases (about 20 in all) of his own, some dental, others for minor surgery, such as opening abscesses in young adults; and his experience corresponded very closely with that of Mr. Cross, he having been able to produce anæsthesia very quickly in about from 16 to 20 seconds. The sign he had gone by was loss of the corneal reflex. There was no obvious sensation during operation, but it had been difficult to obtain complete relaxation of the muscles. The patient said that he had no pain. One of his cases was that of a little boy, aged seven years, for a prolonged operation on the thigh which had to be excised and flushed and sewn up. The operation lasted about 12 minutes. The amount of anæsthetic used was 20 cubic centimetres, small doses frequently repeated being given. The boy became very rigid and once opisthotonos had set in. After the operation he had vomited a good deal, which was one of the symptoms usually believed to be absent with somnoform. The points in its favour were, said Mr. Willett, its portability, its extreme easiness in administration, and its quick action. He did not, however, feel disposed to give it a further trial because he considered gas and oxygen very much better.

Dr. Dudley W. Buxton said that as his experience of the administration of somnoform was slight he proposed to deal with another side of the subject. In the original article of Dr. Rolland some remarks appeared on what was called the physiological action of somnoform. But neither in this article nor in any of the subsequent ones was any serious attempt made to investigate the subject. The admitted composition of the mixture seemed to point to the supposition that the predominant partner was undoubtedly chloride of ethyl. The addition of the chloride of methyl, one which he (Dr. Buxton) believed was not original to Dr. Rolland, but was employed in the so-called "coryl" mixture, possessed a doubtful value, while the small quantity of bromide of ethyl which appeared in somnoform could hardly subserve any purpose other than that of giving the mixture a wicked odour. The Society of Anæsthetics ought, he thought, to record emphatically its censure upon the employment of such fancy and misleading proprietary names as "somnoform," "narcotile," "kelène," &c., and should encourage a careful physiological research upon the action of any new anæsthetic agent before recommending its adoption. But Dr. Swan had mentioned an experiment upon a cat. This experiment was really typical of the unsatisfactory tests which had been applied to somnoform. The cat in question undoubtedly died from asphyxia and incidentally inhaled somnoform during the process. As far as one could at present see somnoform was merely a proprietary and costly form of chloride of ethyl and he (Dr. Buxton) thought its superiority to chloride of ethyl had yet to be proved.

Dr. W J. McCardie observed that he had given ethyl chloride 600 times and that when somnoform first came out he had compared the two and had found no difference. Inventors claimed for somnoform that it was so safe that it could be administered to female patients without taking off their corsets, which was a most ridiculous assertion. The great objection to somnoform was the smell produced by the 5 per cent. of ethyl bromide in it. He could not see any use in this small percentage nor in the introduction of the methyl chloride. It was, he urged, better to use the ethyl chloride alone. It was difficult with somnoform to get relaxation of muscles, but if pushed far enough this might be obtained. Dr. McCardie mentioned a case of trismus in a man with abscess. The mouth was tightly closed. Somnoform was given and the muscles relaxed, allowing a wedge to be placed between the teeth. He considered that Dr. Dudley Buxton had struck the right note in objecting to the name. He (Dr. McCardie) had pointed out to the agent the impracticability of using a drug of unknown composition. It was a most objectionable method of bringing a new drug before the public.

Mr. Harvey Hilliard said that he had used somnoform in the throat department and dental department of the London Hospital in about 200 cases altogether and his experience had been coincident with that of all the other speakers because he had used two methods of administration—the mask recommended by Dr. Rolland and also an Ormsby's inhaler. If given in the mask he found that to produce really deep anæsthesia took very much longer than if given in an Ormsby's inhaler, even as long as one minute or longer. He had seen Dr. Rolland administer the anæsthetic to several cases for tooth extraction and did not consider the patient really anæsthetised; there were much struggling and screaming and the patient was not still enough. Finding the result unsatisfactory he had discarded the mask and used Braine's Ormsby's inhaler. Very excellent results were produced in from 20 to 30 seconds and the quantity used was very much less. The signs of anæsthesia, then, invariably were tracheal stertor, dilatation of pupils, loss of light reflex and loss of corneal reflex, and complete muscular flaccidity. Instead of five cubic centimetres, half was ample for young adults and a quarter of five cubic centimetres produced anæsthesia in 15 seconds in young children. The anæsthesia was very quiet and lasted from one to five minutes, according to the time taken for induction. In adults this took longer than in children. The after-effects were a great drawback to the employment of the drug. When used with Rolland's mask vomiting was common. In half the cases he had had vomiting, but none with the closed method. The symptom most complained of was headache, not immediately, but some hours after. A student to whom he had given somnoform for a dental extraction had said that it was "quite as pleasant as gas, bar the smell." This student made a good recovery without nausea or headache and they parted quite good friends, but next morning he (Mr. Hilliard) was told that the student, having suffered terrible headache and nausea for the rest of the day, was waiting for him with a gun. In another case in private Mr. Hilliard unhappily had given it to a girl, aged 14 years, for a dental extraction; the child was to have returned for a second dose but had suffered so much headache that she refused to come again. He thought that somnoform had no advantage over gas and air except for young children for the removal of tonsils and adenoids and he thought that in that particular class of case somnoform was of some value; but in these cases he had had equally good results with bromide of ethyl. For long operations he thought that it would be distinctly dangerous to give it in a closed inhaler because the operator would not be able to avoid an uneven depth of anæsthesia; at one moment the patient would be deeply, and the next lightly, "under" according to whether a fresh dose of the drug had just been put in the inhaler or not and he did not consider that this was a satisfactory way of giving anæsthetics.

Dr. H. P. Noble was anxious to draw attention to two points; one was the diminution in bleeding after tooth extraction and after removal of adenoids and tonsils and the other was that if the patient was warned of the unpleasant smell and was told to breathe quietly there were no sense of suffocation, no holding the breath, and no struggling. Dr. Noble had had a difficult case of tooth extraction—that of a young man about 25 years of age; oxygen was given, but he commenced to retch directly the face-piece was applied. About a week afterwards he was given pure gas, but he commenced to retch before anæsthesia was produced. A third time gas was given by Paterson's method, but again he vomited. The dentist being hindered in his work somnoform was tried. It was taken well and anæsthesia was produced which lasted for three minutes with no bad after-effects. With regard to after-sickness it was not usual when the patient had been prepared, but many went to the hospital not knowing that an anæsthetic would be used and, of course, they vomited if they had previously taken food

Dr A H BOLYE remarked that the rapid action of the drug was a great advantage He had tried it for the removal of tonsils and adenoids, but had found that it was hardly sufficiently anæsthetic in its action for both together He had had some experience in giving it in longer cases lasting from 10 to 18 minutes In two of these cases in which the patients became very pale and collapsed the anæsthetic was stopped and they then vomited and quickly returned to consciousness In the drinking type there was considerable struggling In one case that of a man with abscesses on both hands to whom he gave somnoform the hands and legs were moving during the whole time and the operator had great difficulty

The report of the council and that of the treasurer were then read

A vote of thanks to the retiring officers was proposed by Dr DUDLEY BUXTON who in a eulogistic speech in the name of the society, thanked Mr George Ea tes for his untiring work for the society during the last five years This was seconded by Dr H LOW The following officers for the next session were then elected President Mr C Carter Braine, vice president Dr J F W Silk, honorary treasurer Dr R J Probyn Williams, members of council, Mr Walter Tyrrell, Dr Flux and Dr C J Woollett, honorary secretaries Mr Harvey Hilliard and Dr McCardie, and auditors, Dr J Blumfeld and Dr Ada M Browne

WEST KENT MEDICO CHIRURGICAL SOCIETY

The Principles of Dietetics

A MEETING of this society was held on April 3rd Dr GEORGE HERSCHELL, the President being in the chair

Dr ROBERT HUTCHISON opened a discussion on the Principles of Dietetics with an address which is published in full in this issue of THE LANCET

The PRESIDENT said that as regarded his own part in the discussion that evening he should like to say a few words upon the principles which guided them in the selection of appropriate diet for some of the commoner forms of affections of the stomach He would speak first of morbid sensibility of the stomach This might be met with in two distinct conditions (1) as a purely functional disorder, and (2) as a symptom of some anatomical or structural disease of the stomach The diet was essentially different in each Whilst in functional hyperæsthesia of the stomach they were unable to lay down any hard and fast rule as the stomach reaction to food was not constant, on the other hand in hyperæsthesia due to a distinct anatomical disease the irritability produced by food always varied in direct ratio to its digestibility In the latter case they would find that if alcohol, acids, condiments sweets peptones, strong soups, and meat extracts were excluded and the food in a finely divided state was given not too hot and not too cold the symptoms of the patient would be invariably alleviated Such a diet was therefore indicated to be gradually increased as the patient recovered In the hyperæsthesia of a functional nature they would not be so fortunate, they would search in vain for a diet on which the patient could live without pain, in some cases the stomach was even conscious of the contact of its own walls and was painful when empty The rule which should guide them then, in prescribing a diet for such cases was to cease to attempt to find a diet upon which the patient could live without pain but to put him on one which theoretically should not disagree, and ignore the sensations which followed the meal Of course if any article of food was found which manifestly caused distress either it should be omitted from the dietary or, better still administered in a finely divided state and in smaller quantity Most sufferers from gastric neurasthenia were starving themselves and it must be borne in mind that if the daily food was reduced below the limits required for the maintenance of the equilibrium of the body the stomach would participate in the general tissue starvation and its condition of irritable weakness would be perpetuated. Under the heading of conditions associated with excess of hydrochloric acid in the stomach they had ulcer, functional hyperchlorhydria, and organic hyperchlorhydria due to hypersthenic glandular gastritis—that was to say, a form of chronic gastritis associated with increase and proliferation of the secreting glands of the stomach In dieting the members of this group they were guided by the main principle to provide a food as unirritating and indifferent in its local action as possible, whilst at the same time having as high a combining power for hydrochloric acid This was effected by minute subdivision elimination of any particles which might be insoluble the omission of condiments and the reduction of starch to a minimum As Dr Hutchison had said the ranks of specialist physicians who devoted attention to affections of the stomach were split up into three groups (1) those who favoured an albuminous diet; (2) those who believed that meat, although having a high combining power for hydrochloric acid, yet from its stimulating action would eventually lead to a larger secretion and therefore give starch, and (3) those who favoured a mixed diet As a matter of fact, the fact was lost sight of that the digestion of no other kind of food left so much hydrochloric acid free in the stomach as starch and the stimulating action of meat upon the gastric secretion varied very much according to the manner in which it was given Beef steak grilled and eaten in the ordinary way produced a far greater stimulating action than when scraped free from fat and fibre made into small cakes, and slightly grilled Functional and organic hyperchlorhydria should both be treated with the same articles of diet prepared in the same manner, but an important difference existed as to the best arrangement of meals in the two conditions In organic affections it was not so necessary to secure immunity from mechanical irritation and they could therefore give out food in three large meals a day The great advantage would be that whilst the stimulating property of the meal would not be sensibly increased, there would be a larger bulk available for mopping up the hydrochloric acid and less free acid would be left at the close of the meal With ulcer and organic hyperchlorhydria as they wished to reduce mechanical as well as chemical irritation to a minimum they should give several small meals of bland, finely divided food with as high combining power for hydrochloric acid as possible As regards subacidity, in cases where the secretion of hydrochloric acid in the stomach was in defect it was obvious that the greater part of the digestive work must fall upon the intestines The first main fact which would strike them was that there being deficiency or absence of acid in the stomach the digestion of starch begun in the mouth would not be inhibited in the stomach They might therefore, with confidence increase the amount of starchy food to make up for the defective digestion of proteids in the stomach The observation of the cases in which total extirpation of the stomach had been performed showed that an ordinary mixed diet need not be departed from provided that eggs, which were likely to undergo fermentation in the intestines, were excluded and the food was given in a fine state of subdivision In the dieting of the motor weaknesses of the stomach in my-

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layer and helping to restore the contractility If, on the other hand the stomach was irritable as well as weak the food must be bland, unirritating and finely divided In all cases it was best to limit the amount of fluid taken during the meal and to let most of the drinking be done about an hour before In severer cases they might have to suspend for a time nearly all liquid by the mouth and to give it in t

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When arising from the latter cause they should always commence treatment by ascertaining that the mouth and gums were free from pyorrhœa alveolaris It had always been a source of wonder to him why a medical man with a case of gastric fermentation washed out the stomach, eliminated all fermentable material from the food sterilised the water and milk which the patient took, and yet allowed him to go away without once looking into the mouth and examining into the state of the gums. In pyorrhœa the patient swallowed with every mouthful of food several minims of pus containing millions of micro-organisms and they could see what a futile and hopeless task it would be to try to stop the fermentation in the stomach when they were allowing the alien germs freely to enter it. The next thing to do was to lavage the stomach. Then they could put the patient upon a diet consisting of meat, gelatin, and dextrinised bread. Green vegetables, fats, starch, sweets, and fruit were excluded, but these might be gradually added to the diet as improvement took place. In very bad cases it was a good plan to abandon feeding by the mouth entirely for a few days, devoting the time to daily lavage and rectal feeding.

Dr. LEONARD LL. B. WILLIAMS proposed a vote of thanks to Dr. Hutchison and said that he would like to add his thanks to those of the President for the very complete and suggestive survey of a difficult subject to which Dr. Hutchison had treated them. The question of diet in nervous disease upon which he had been asked to speak might be summed up in the advice to avoid stimulating foods and stimulating liquors. Dr. Hutchison had not gone into the very important question of alcohol, a question round which many nervous disorders might be said to revolve, but it nevertheless seemed impossible to exclude it from the present consideration. The power of taking alcohol with impunity might be, and to some extent certainly was, an individual matter; but it was also to an extent too little appreciated a climatic matter. The greatest consumers of whisky in the world were the Scotch and yet the two diseases which they were accustomed to regard as the classical examples of the consequences of spirit-drinking—namely, alcoholic peripheral neuritis and hepatic cirrhosis—were so uncommon in Scotland as to be considered rarities. The Scotch were, in fact, able to indulge in ardent spirits with an impunity which to us seemed very astonishing. He would not go so far as to say that the element of climate offered the whole solution to this problem, but he thought that the facts pointed very strongly to the advisability of taking some notice of local customs in the matter of alcoholic drinks, so that if the Scot stuck to his whisky the Englishman would be well advised in being faithful to his beer, the Devonian to his cider, and so on. He deprecated very strongly indeed the fashion which had grown up of late among medical men of advising their patients to drink whisky in lieu of wine or beer. Spirits led much more readily to habits of intemperance than did either beer or wine and the ease with which it was obtained made whisky a great danger in this direction. He though that very grave responsibility rested upon any man who recommended whisky to his patients, especially if those patients were females.

Dr. MORGAN DOCKRELL considered that the theory that dyspepsia was the cause of rosacea and acne was a mistaken one. Acne was due to blocking of follicles and diet had nothing to do with it. In lupus erythematosus diet was important, as it was necessary to get rid of uric acid. It was important to know how far urticaria required dieting.

Mr. CHISHOLM WILLIAMS spoke on the subject of diet in relation to obesity He had tried every known remedy for obesity but without result. On several occasions he had found that a change of diet led to an attack of influenza.

Dr. R. E. SCHOLEFIELD said that the same diseases were found in various countries with different diets. This made him sceptical as to the influence of diet. It was useless to argue from the diseases of the Hindoo to those of the Esquimaux and the Scot. He still stuck to a diet of pure sterilised milk for infants and his success had been surprising. The next best diet was egg albumin and water. Occasionally obesity was found even in infants. This was often due to anæmia and might be cured by iron.

Dr. T. C. MEGGISON asked for suggestions with regard to diet in anæmia.

Dr. HUTCHISON, in replying, said that he was in accord with Dr. Leonard Williams that alcohol and tea should be avoided in nervous diseases. The mode of drinking might account for the fact of there being more cirrhosis of the liver in England than in Scotland. The Scot usually drank on Saturday night only while the Englishman was always soaking in beer. He did not find Haig's diet useful in gout. He did not think that diet was of much importance in anæmia, but many girls suffered from anæmia because they did not eat enough meat.

HARVEIAN SOCIETY OF LONDON.—A meeting of this society was held on April 2nd, Dr. W. Winslow Hall, the President, being in the chair.—Dr. L. G. Guthrie read a taper on Some Ancient Remedies and on Gideon Harvey, a seventeenth-century physician. He commented briefly on the position of medicine in the latter half of the seventeenth century, showing that the progress of scientific treatment was impeded by ignorance of pathology, by neglect to make use of the great anatomical discoveries of the age for practical purposes, by superstition and tradition in the use of the remedies employed, by multiplicity of medicaments and ignorance of their physiological action, and by abuse of venesection, vesication, issue-making, sweating, purging, emesis, and salivation. Valvular heart disease, cardiac and renal dropsy, and all forms of nephritis, except that dependent on calculus, were unrecognised. Biliary colic, or at all events the jaundice associated with it, was regarded by Sydenham as a manifestation of hysteria. The urine in diabetes mellitus was known to be sweet, but no importance was attached to the fact. Willis thought that all diseases were due to alterations in the crasis of the blood, which he held to be composed of spirits, sulphur, salts, earth, and water. In fevers he believed that the spirits literally boiled, and the sulphur took fire and smouldered. Treatment consisted in attempting to drive noxious substances out of the blood by the methods mentioned above. Historical instances were given in which death was hastened by excessive bleeding and purging, as in the case of Charles II. Gideon Harvey, physician to Charles II., rendered considerable service to medicine by counselling the use of a few remedies the action of which was understood. He showed that the 60 or 70 ingredients of those very popular medicines Venice treacle and mithridate were mostly incompatible and that these compounds owed their virtue solely to the opium which they contained. He parodied Sydenham's famous "expectant attitude" towards diseases with which he was unfamiliar, in a witty little book called "The Art of Curing Disease by Expectation." Gideon Harvey's services to medicine never met with the recognition which they deserved, partly on account of his bitter hostility towards all his contemporaries, and towards the College of Physicians in particular, and partly on account of his inveterate habit of hinting in all his works that he possessed secret remedies and specifics against all diseases. But the pharmacopœias published after his day show that his views were tacitly accepted, as most of the loathsome and absurd preparations which he condemned were left out.—Mr. Raymond Johnson read a paper on Some Mistakes in the Diagnosis of Malignant Disease. He pointed out how mistakes in diagnosis were often due to the primary tumour being overlooked while a symptom caused by a secondary deposit was regarded as the essential disease. In illustration of this reference was made to the case of a woman who came under treatment for almost symmetrical paralysis and muscular atrophy in the upper limbs. The nature of the case was altogether doubtful until a small hard carcinomatous nodule was accidentally discovered in one breast. The necropsy revealed widely disseminated secondary growths, the muscular atrophy being caused by a deposit in the spine in which nerve roots supplying the brachial plexus were involved. Special attention was directed to secondary deposit of cancer in the bones, for if the existence of the primary tumour was unrecognised a secondary cancer might be easily mistaken for a primary sarcoma and possibly amputation of the limb might be performed before the mistake was detected. The diagnosis of malignant disease of the large intestine was not infrequently complicated by the occurrence of a large abscess in connexion with the growth; the abscess might be diagnosed while the tumour causing it was overlooked. Lastly Mr. Johnson referred to the many difficulties met with in the diagnosis of retro-peritoneal sarcoma. A case was mentioned in which an exploratory abdominal section performed on a young man revealed the presence of a large retro-peritoneal tumour having the characters of a soft hæmorrhagic sarcoma. However, a history of epistaxis was obtained and in early life the patient was said to have had an attack of "blood in the joints." This suggested the possibility of an extravasation of blood occurring in a "bleeder." The outcome of the case supported this view. For many months altered blood oozed from an opening in the middle of the abdominal incision, and the tumour gradually completely disappeared. Four years later the patient was in perfect health.—Dr. James Taylor said that he himself knew of an instance similar to the one mentioned by Mr. Johnson, in which the patient, whose case at one time was supposed certainly to be fatal, was now absolutely well. On the other hand, cases unfortunately occurred in which the patient, supposed to be suffering from functional disorder only, ultimately died from malignant disease.—Mr. J. D. Malcolm and Dr. Marmaduke Prickett also took part in the discussion.

SOCIETY FOR THE STUDY OF INEBRIETY—The last quarterly meeting of this society was held on April 21st, the *President, Dr Harry Campbell*, being in the chair —The President delivered his annual address on the Study of Inebriety a Retrospect and a Forecast The object of the society, he said, was the study of inebriety in all its forms—not only the inebriety produced by alcohol, but also the various forms of drug inebriety, such as those produced by opium, cocaine, chloral, and sulphonal, as well as by tobacco, tea, and coffee He pointed out that caffeine, the active ingredient of tea and coffee, was a vegetable waste product, an excrementitious substance allied to the waste products of the animal organism (urea and uric acid), that it was excreted as such by the kidneys and might thus in course of time predispose them to disease Caffeine had, moreover, a powerful action on the heart and blood-vessels, as well as upon the nervous system, and he raised the question whether it was wise to administer this drug as a matter of routine to children He attributed much of the nervousness not only among adults, but among children, especially the children of the poor, to the practice of excessive tea drinking He asked the question why it was so difficult to get a good cup of coffee in this country Many of the poor had never tasted the pure article Tobacco inebriety was a subject which just now especially claimed attention He had over and over again seen the nervous system shattered by excessive smoking The practice of cigarette smoking among boys had reached dangerous proportions and needed legislative interference He had little sympathy with the superlative fear, prevailing among many of interfering in the slightest degree with individual liberty, that bogey would vanish with increasing social enlightenment Let the individual have all the liberty which he craved to do good but do not let him have a free hand, above all before he arrives at years of "discretion," to injure himself and thus indirectly the State He pointed out that the ill effects of alcoholic drinks were largely due, not to the alcohol which they contained, but to foreign substances such as arsenic and lead, as well as to deliberate adulterations If people would drink alcohol steps should be taken to see that the community was provided with an unadulterated article, especially when that community spent something like £150 000,000 annually on its drink bill Much inebriety of all sorts was induced by advertised *nostrums* One had made thousands of chloral drunkards All owners of nostrums should be compelled to publish with each sample an analysis of its contents To allow this trading in secret remedies was unworthy of an enlightened people and an insult to that large army of scientific workers, all over the world, who were earnestly, patiently, and laboriously seeking to fight disease content to get their reward, not in financial advancement, but in the knowledge of good work done —The Honorary Secretary read for Mr Arthur Sherwell a paper on Inebriety in Scotland, in which, as the result of an extensive statistical investigation regarding the returns as to the consumption of alcohol prison records reports of mental cases, and official figures of the mortality from intemperance it was shown that inebriety was on the increase and particularly in female subjects —A large number of members and associates took part in the discussion.

LARYNGOLOGICAL SOCIETY OF LONDON—A meeting of this society was held on April 3rd, Dr J Dundas Grant, Vice President, being in the chair —Dr W H Kelson showed a case of Infiltration of the Epiglottis Arytenoepiglottic Folds, Arytenoids, and Right Ventricular Band, in a man, aged 55 years, probably tuberculous, though no tubercle bacilli could be found in the sputa and there was no sign of pulmonary lesion —Dr E Furniss Potter showed a case of Singer's Nodule in a man, aged 41 years affecting the left vocal cord.—Dr H Tilley showed a case illustrating Radical Cure (by obliteration) of Bilateral Maxillary Sinus Empyema. Large openings were made in the canine fossæ, the lining membrane was scraped, and the cavities were packed for two days, after which nothing further was done except to syringe out twice daily and carefully to dry the antra. It was shown that the cavities were now practically filled with granulation tissue, it being only just possible to pass a probe upwards through the fistulous track through the original opening in the canine fossa —The case was discussed by Dr G W Hill Dr F de Havilland Hall, Dr H W Fitzgerald Powell, Mr E B Waggett, Dr H Lambert Lack, Dr R H Scanes Spicer, and Dr Dundas Grant —Dr L H Pegler showed a case of *Clonic Spasm* of the Muscles of the Palate and Pharynx causing Entotic Tinnitus —Dr J [illegible] he Pharynx and Larynx [illegible] —Mr L A Lawrence [illegible] soft Palate —Mr F H Westmacott showed a *specimen and section* of Acute Tuberculosis of the Left Tonsil from a man, aged 32 years There was no *family history or evidence of* tubercle [illegible] spread to the soft palate [illegible] ealy, I M S, showed a mic[illegible] Psorospermosis of the Mu[illegible] Membrane of the Septum Nasi He had been unable to find any previous record of *this disease* having occurred in the nose The origin in this instance was attributed to direct infection *from raw hides* among which the patient had been working —Mr R S *Charsley* showed a case of Polypi of the Maxillary Antrum —Mr Waggett showed (1) A case of Sphenoidal Sinus Suppuration in which the anterior wall had been removed with an instrument *designed* by Dr Lack, and (2) a case and specimen of Papilloma *of* the Larynx.—Dr Dundas Grant showed (1) *A case of Immobility* of the Left Cord attributable (?) to bronchocele, in which resection and extirpation of the isthmus and *left lobe had been performed* (Dr de Havilland Hall *remarked that there* were more thickening and enlargement of the left arytenoid than were accounted for by pressure *on the left recurrent* [illegible] her than a paralytic con[illegible] Recurrent *and the Left* [illegible] woman, and (3) a case [illegible] 'hs' duration in a man, aged 50 years, probably epithelioma —Dr H J *Davis* showed a man, aged 27 years, with a swelling on the right side of the larynx causing partial occlusion, and with a history of hoarseness for the last six years —The case was discussed by Sir Felix Semon, Mr H T Butlin, and *Mr* Waggett —Dr V H Wyatt Wingrave showed a case of Rapid Destruction of the Nasal Septum —Dr H Burt showed a case of Goitre with Early Exophthalmos

HUNTERIAN SOCIETY—A pathological *evening* of this society was held on March 25th, the President, Dr Stephen H Appleford, being in the chair —Dr J W M Ettles showed a case of Blepharo spasm without Ocular Lesion —Mr T Horrocks Openshaw, C M G, showed a specimen of a Section through the Pelvis of a patient the subject of congenital hip-joint disease This specimen showed clearly that it was impossible in some cases to replace the head of the femur in the acetabulum by manipulation The opening of the latter was seen to be much too small to admit the head of the femur —Dr W H Kelson showed a specimen and slide exhibiting Extensive Ulceration of the Larynx and Œsophagus in a woman, due to epithelioma.—Dr L A. Smith showed a specimen of a Large Kidney which on section proved to be made up of a number of small cysts with scarcely any renal substance remaining The fluid found in them was identical with that found in ovarian cysts and there was no evidence of duct obstruction —Dr W A Milligan showed two microscopic specimens (1) A specimen from a case of Carcinoma of the Stomach, in which the [illegible] ndication of such mischief (2) [illegible] Uterus from a woman, aged 63 [illegible] carcinoma. There was a history of only a few weeks At the operation the entrance of the dilator was prevented owing to blockage at the internal os, but on pressure the dilator was introduced and on withdrawal a copious flow of pus ensued A condition of pyometra had been set up by rapidly growing carcinoma.—Dr E W Goodall showed the fauces, larynx, and œsophagus from a case of Diphtheria. The patient was a boy, aged four and a half years who w[illegible] on March 22nd, 1903 on [illegible] theria which proved fata[illegible] post mortem examination there were two or three subcutaneous hæmorrhages on the legs and many subcutaneous hæmorrhages in the stomach. There was much membrane on the soft palate and tonsils and some in the larynx. The lower two inches of the œsophagus were covered with membrane, but there was none in the stomach. The specimen was shown on account of the rarity of membrane in the œsophagus —Sir Hugh R Beevor sent a specimen, which was shown by the secretary, of Syphilitic Liver taken from a girl, aged 16 years The specimen was indistinguishable at first sight as a liver There had been signs of hereditary syphilis present.—Mr. F. Gordon Brown exhibited an aorta which had been transfixed by a stab from a sharp knife which had penetrated the sternum. The point of interest in the case was that the walls of the aorta had been pushed in front of the knife for a certain distance before the cut was made so that the incision was not linear, and, like most of these fatal stabbing cases, both walls of the vessel were perforated. Death had been instantaneous.

FORFARSHIRE MEDICAL ASSOCIATION.—The sixth ordinary meeting of this society was held in the University College, Dundee, on April 3rd, Dr. W. Graham Campbell being in the chair.—Mr. D. M. Greig showed among other cases a man, aged 38 years, after primary amputation of the entire upper extremity including the scapula and outer two-thirds of the clavicle, necessitated by a severe laceration of the limb with great destruction of skin. Mr. Greig attributed the per primam healing to the patient's having had for the six days following the operation a daily injection of ten cubic centimetres of anti-streptococcic serum. He pointed out that the leaving of the inner third of the clavicle with the attachment of the clavicular portion of the sterno-mastoid muscle helped to retain the symmetry of the neck.—Professor D. MacEwan showed a Hydronephrotic Kidney removed by operation.—Dr. R Cochrane Buist read a paper on Puerperal Infection. After a sketch of the natural defences against infection he referred to the use of abdominal palpation and discussed the deleterious effects of intra-partum antiseptic douching. Under the head of therapy he urged the use of ergot, the bad results of routine curettage, and the dangers of the antiseptic intra-uterine douche, especially with mercurials. He recommended solutions of salt or sodium bicarbonate followed by strong alcohol. In the general treatment he mentioned the failure of serum and the mischief of extreme alcoholisation and while insisting on the fallacy of reasoning from individual cases considered the reports of good results obtained from the use of remedial measures such as antipyrin, silver, and artefact abscess.—Professor J. A. C. Kynoch in his remarks pointed to the necessity for absolute care in the cleansing of the hands He agreed that abdominal palpation was useful, but it did not give all the information that the vaginal examination gave. He considered that the danger of mercurial poisoning after treating with mercurial lotion was no greater than that after other antiseptics. It was due to mercurial douching that maternity hospitals, formerly dangerous institutions, were now relatively free from danger —Professor C. R. Marshall strongly emphasised the great danger in douching such cases with perchloride of mercury lotion.

PATHOLOGICAL AND CLINICAL SOCIETY OF GLASGOW.—The seventh ordinary meeting of this society was held on April 20th, Mr. A. E. Maylard, the President, being in the chair.—Dr. John Anderson showed as a fresh specimen a Brain in which an abscess in the Rolandic area had extended into the lateral ventricles. It was connected with a case of empyema.—Mr. J. Grant Andrew showed a boy who was operated on for Foreign Body in the Left Bronchus; removal was attempted by posterior bronchotomy through the pleural cavity.—An interesting discussion on the treatment followed, an expectant line being strongly advocated by Sir Hector C. Cameron.—Mr. Henry E. Clark exhibited (1) a Bladder showing Sacculation and Abscess Formation from a case of enlarged prostate, as well as the Kidneys from the same case; and (2) a Uterus the subject of Carcinoma of the Body removed by the para-vaginal method.—Mr. John H. Teacher reported on the intestinal concretion shown at the last meeting by Dr. J. Crawford Renton, which proved to be an oat-seed concretion (avenolith) and exhibited for comparison a number of specimens of similar concretions from the Hunterian Museum, University of Glasgow.—Dr. J. Kerr Love showed a series of stereoscopic photographs illustrative of the Anatomy of the Temporal Bone which were highly appreciated.—The following card specimens were shown by the President: Three sets of Gall-stones removed from the same case—(1) faceted stones from the gall-bladder; (2) one large corrugated stone impacted in the cystic duct; and (3) a similarly corrugated but smaller stone impacted in the common duct.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on April 1st, Mr. J. Mackie, the President, being in the chair.—Dr. Astley V. Clarke, the honorary secretary of the Leicester Medical Society, introduced the subject of the proposed incorporation of local medical societies with the British Medical Association and he urged that the Nottingham Medico-Chirurgical Society should consider it.—Mr. R. C. Chicken showed: (1) A young man with Partial Dislocation of the Spine in the Cervical Region (with a skiagram); and (2) a patient with Synovial Arthropathies.—Mr. Chicken then read a paper on Pseudo-hypertrophic Synovitis. He described a condition frequently met with in miners and others following laborious occupations in which the alar ligaments of the knee-joint, and more especially the internal, increased in size and thickness; during movement they became trapped between the articular surfaces, giving rise to symptoms closely resembling those caused by a loose cartilage. The exquisitely sensitive edge of the thickened synovial membrane could be felt plainly just in front of the internal lateral ligament, quite distinctive from a loose cartilage except in the very earliest stages. Excision of the affected membrane was the only radical cure.—Dr. T. A. Clinch read a short note on Bullæ, their Medico-legal Aspect.

WIGAN MEDICAL SOCIETY.—A meeting of this society was held on April 9th.—Dr. M. Benson, the President, read his presidential address on the Treatment of Disease in accordance with the Symptoms exhibited.—The paper was an interesting one and gave rise to a good discussion, the following members taking part in it: Mr. C. M. Brady, Mr. William Latham, Mr. J. H. Fletcher, Mr. L. Cooke, Mr. J. E Parker, Mr. G. H. Monks, J.P., Dr. R. P. White, and Dr. John Blair.—A cordial vote of thanks was passed to the President and he replied to the discussion.

Reviews and Notices of Books.

A System of Clinical Medicine, dealing with the Diagnosis, Prognosis, and Treatment of Disease, for Students and Practitioners. By THOMAS D. SAVILL, M.D. Lond., Physician to the West-End Hospital for Diseases of the Nervous System; Physician to St. John's Hospital for Diseases of the Skin, London; formerly Medical Superintendent of the Paddington Infirmary. Vol. I. Local Diseases and Microbic Disorders. London: J. and A. Churchill. 1903. Pp. 702. Price 12*s.* 6*d.*

IN writing a System of Clinical Medicine Dr. Savill has adopted a plan which we believe will be found to be of great assistance both to students and to practitioners. He has approached the subject from the standpoint of symptomatology. Especial stress is laid on regional anatomy and the localisation of symptoms, whilst morbid anatomy and pathology are made to take rather a subordinate position and are only referred to in their strictly practical bearings. Not that we approve in any way of the separation of clinical medicine and pathology—that would be a grave retrograde step; but there are so many excellent special treatises on morbid anatomy and pathology that a work on purely clinical medicine may be cordially welcomed.

A uniform plan has been adopted throughout the whole volume. The first chapter is preliminary and describes the examination of patients and indicates certain general principles underlying methods of observation, diagnosis, prognosis, and treatment. In the second chapter the physiognomy of disease is discussed. The succeeding chapters deal seriatim with the symptoms and signs referable to the several organs or anatomical regions of the body taken in the order in which they ordinarily are examined, the causes of those symptoms, and the diagnosis, prognosis, and treatment of the diseases to which they refer.

Each chapter is divided into three unequal parts. Part A treats of the symptoms which may indicate disease of the organ or region under discussion and the fallacies incidental to their detection and supplies an account of the various causes which may give rise to those symptoms. Part B deals with the physical signs of disease in that region and the various methods employed to elicit them. Part C, which constitutes the major portion of each chapter, is prefaced by a clinical classification of the various maladies affecting that region and a summary of the routine procedure to be adopted, and these are followed by a series of sections dealing with the several diseases arranged according to their clinical relationships. This scheme has been admirably carried out and for the most part Dr. Savill has been successful in producing a very useful and practical work. A captious critic might find fault with certain details and there are one or two points to which exception may well be taken, but regarded as a whole the book will prove a valuable one to those for whom it is intended.

As an example of the way in which the diseases of the various systems of the body are considered we will take Chapter VI. which is headed "The Lungs and Pleuræ." After a few introductory remarks Dr. Savill proceeds to "Part A, Symptomatology." The cardinal symptoms are described and differentiated, such as cough, breathlessness, expectoration, pain in the chest, and hæmoptysis. The remarks on those manifestations are full and the description is accurate. In Part B, which deals with Physical Examination, minute directions are given as to the examination of the lungs by means of inspection, mensuration, percussion, palpation, and auscultation. Of this part also we can speak in approving terms. Part C is headed "Diseases of the Lungs and Pleuræ, their Diagnosis, Prognosis, and Treatment." These diseases are divided into acute and chronic, and subdivisions are formed according as to whether the percussion note is unaltered or whether there is dulness or hyper-resonance; for clinical purposes this is a fair practical classification. Each disease is then considered separately, a diagnosis first being arrived at. For instance, under the division Acute Diseases we find a paragraph in italics: "I. The patient complains of a cough with frothy expectoration and his temperature is slightly elevated; there is no alteration in the percussion note, but on auscultating the chest loud rhonchi are heard. The disease is acute bronchitis." A detailed description of the symptoms, physical signs, differential diagnosis, prognosis and treatment follows. In the great majority of instances this plan answers well, but we have noted some exceptions. For instance: "III. The patient complains of breathlessness; on examining the chest dulness is found at one or both bases; and on auscultation fine crepitations are heard. The disease is pulmonary congestion or œdema." Pulmonary tuberculosis occasionally commences at the base of the lung and may give rise to the same symptom and physical signs; likewise, these signs are not infrequently met with after a subsidence of pleurisy with effusion. Neither of these conditions is mentioned in the text. These exceptions do not, however, alter the value of the general arrangement adopted by Dr. Savill. We commend the use of the italicised paragraphs which, standing at the head of each section dealing with a separate malady, emphasise the salient features by which a disease may be recognised and differentiated from others belonging to the same group. The paragraphs referred to are brief clinical definitions and they form, as Dr. Savill expresses it, "sign posts" or guides in the process of diagnosis.

Whilst the symptoms, diagnosis, and prognosis of each disease are fully and accurately described we cannot speak in such terms of the sections devoted to treatment. The remarks on this subject are vague and wanting in detail. Certain drugs are mentioned but the methods of administering them in different circumstances are not sufficiently fully stated, and in future editions of the work the sections dealing with therapeutics may with advantage be considerably amplified. We should mention, however, that at the end of the volume are a large number of useful formulæ for prescriptions. Another matter which we should like to see altered (it may be considered a trivial one) is the free use of contractions of words and phrases in which Dr. Savill indulges—such as "r" and "l" for right and left, "C.V.D." for cardiac valvular disease, and "R.M." for respiratory murmur. To most readers these contractions are objectionable and they serve no useful purpose. As we have already said, however, taking the book as a whole, we have formed a high opinion of Dr. Savill's work; we wish it the success that it deserves and look forward with interest to the publication of the second volume.

Diseases and Injuries of the Eye, with their Medical and Surgical Treatment. By GEORGE LAWSON, F.R.C.S. Eng., Consulting Surgeon to the Royal London Ophthalmic Hospital and to the Middlesex Hospital. Sixth edition, with 249 Illustrations. Revised and in great measure rewritten by ARNOLD LAWSON, F.R.C.S. Eng., Assistant Surgeon to the Royal London Ophthalmic Hospital. London: Smith, Elder, and Co. 1903. 8vo., pp. 587.

THIS volume contains the observations and experience of two generations. Mr. George Lawson, ophthalmic surgeon in ordinary to our late Queen, published many years ago a manual which on account of its accuracy, comprehensiveness, and brevity was very favourably received by the profession and especially by those who were, or had been, studying at the Royal London Ophthalmic Hospital. It ran through several editions. But as is usual with scientific works that have received frequent emendations, corrections, and additions, it required, in order that it might be brought up to the present state of our knowledge, complete recasting. This Mr. Arnold Lawson has set himself the task of accomplishing and we doubt not that it has been a labour of love. The book has been considerably enlarged and to a large extent re-written. Chapters on the Development of the Eye, the Pupil, the Affections of the Eye in Diseases of the Nervous System, and other subjects have been added and the general arrangement of the whole work has been remodelled. Many new woodcuts have been inserted and the majority of these are extremely well executed and instructive.

The feature of the treatise that will be most appreciated by the more advanced reader is the manner in which disputed points are discussed. Thus, in regard to sympathetic ophthalmia the authors observe that there is in general a well-marked distinction between sympathetic irritation and sympathetic ophthalmitis, though doubtless cases are occasionally met with in which long-standing sympathetic irritation may run into sympathetic ophthalmitis. The chief differences between the two conditions, it is pointed out, are first that in the former affection, notwithstanding frequent recurrences of inflammatory symptoms, no fibrinous effusions or disorganising changes of the different tissues of the sympathising eye take place, and, secondly, that the excision of the originally injured eye at once arrests the disease. In considering sympathetic ophthalmitis the arguments in favour of a specific origin and those against that view are concisely given. In describing the operation for the extraction of cataract, the three-millimetre flap operation, the cut corresponding to the upper margin of the cornea, is recommended. The steps of the operation in general use are followed and in speaking of the needling of secondary cataract or of capsular opacities it is justly remarked of this proceeding, so lightly undertaken by the inexperienced operator, that the risk which attaches to it is almost as great as that attending the extraction of an uncomplicated cataract and it is proposed that if a patient can read No. 6 of Jaeger's test-types he, as well as the surgeon, should be satisfied; with this dictum we are thoroughly in accord. Nothing is more disappointing to the patient who has passed through the anxiety attendant upon the first operation, and who has been told that the secondary operation is a mere trifle, than to find that its result, unless an instant sclerotomy or iridectomy is performed, has been to destroy all the good effects of the surgeon's skill and his own patience; the benefit which he had fully expected would result in the permanent recovery of vision is lost. A satisfactory account is given of granular conjunctivitis or trachoma. The authors regard this affection as presenting two forms, the acute and the chronic. They consider it to be contagious and to be distinguished from follicular conjunctivitis by the circumstance that it always affects the palpebral conjunctiva; they say that its intractable nature renders strong measures indispensable and these measures are given in full detail.

The chapters on the Choroid and Retina with the accompanying illustrations show what great advances in the diagnosis of the diseases affecting the interior of the globe have been made since the introduction of the ophthalmoscope, though, unfortunately, with but little improvement in the treatment. In the chapter on Diseases of the Lacrymal Apparatus some judicious remarks are made on the application of probes and the objections which exist to the employment of very large ones are clearly stated.

An interesting chapter is devoted to the method at present in use for the localisation of foreign bodies in the eye by the x rays and a description is given of Mackenzie Davidson's apparatus with cross threads. A drawing is also introduced of the powerful magnet employed by Haab. By the precise localisation of the foreign body in the eye with the subsequent employment of the magnet excellent results have been obtained. At the Royal London Ophthalmic Hospital Mr. A. F. MacCallan finds, on a review of all the cases in which these means have been used, that 58 per cent. of injured eyes have been saved.

Much pains have been taken with the chapter on the Affections of the Extrinsic Ocular Muscles and the action of these muscles and the results of their paralysis are very clearly described

We must not omit to refer to the index, the compiling of which doubtless involved considerable labour. It not only contains an unusually large number of entries but it gives many cross references. Thus, under the head "Ciliary Body" there are no less than nine primary references—viz., to the anatomy of this region, to ciliary asthenopia, carcinoma, cysts, diseases, injuries, inflammation, tumours, and wounds of this region, with cross references to iris, ciliary body, and cyclitis.

In conclusion, we have no hesitation in expressing the opinion that the treatise is a thoroughly trustworthy guide to the student and the practitioner and a valuable addition to the ophthalmological literature of this country.

The Uniform System of Accounts for Hospitals, Charities, Missions, and Public Institutions. By Sir HENRY BURDETT, K.C.B. London: The Scientific Press, Limited. 1903. 9½ × 6 inches. Pp. x., 103. Price 4*s.* net.

SINCE "The Uniform System of Accounts, Audit, and Tender" was first issued in 1893, not only the London hospitals and public institutions, but a large number of charities and smaller institutions of a similar character throughout the kingdom and in some British colonies have found it desirable to avail themselves of the methods inculcated. Every foundation dependent for its income upon voluntary contributions may find among its supporters benevolent persons who will be moved to give without exact inquiry into the details of its expenditure, but at the same time it will have among those who sympathise with its work a far greater and more important section of the public who will wish to know its financial position and to be satisfied that their money is carefully and economically dealt with before they appear among its subscribers. In order that these may be able easily to obtain the necessary information it is clear that the public institution desirous of their support must not only keep its accounts accurately, but must so keep them that they may be readily and lucidly summarised for the benefit of those who have no time to study them in a more voluminous form. Uniformity of system renders comparison easy, and the institution that so offers its accounts that they can be fully understood and compared with those of kindred establishments will not suffer by its candour. It is hardly necessary to refer to the admirable effect which the introduction of a simple and universal system of accounts has had in London. It has, in particular, rendered possible the working of the Hospital Sunday Fund, which, in order to be able to test efficiency, has exacted uniformity from the hospitals to which it has made distribution and has thus paved the way for the effective working of the other great funds the committees of which have followed in its footsteps. The present volume amplifies and enlarges the former guides which have been published to the same end and its careful study is to be commended to all those interested in the maintenance of hospitals, cottage hospitals, orphanages, and other institutions of corresponding character whether great or small in which the system advocated has not yet been introduced. Many hospitals and infirmaries in country districts have upon their governing bodies gentlemen and ladies whose concern is with the business and financial, rather than with the medical, conduct of charities which may not be over-flourishing. To such as these Sir Henry Burdett's latest issue should prove a valuable aid. It may be added that the books of account the use of which is recommended are now obtainable from the Scientific Press, Limited, so that the expensive necessity of having books ruled and printed to suit the exigencies of hospital work may be avoided.

LIBRARY TABLE.

Inoculation against Malaria. By Dr. PHILALETHES KUHN, Staff Surgeon to the Imperial Troops of the South-West Africa Protectorate. Translated by H. A. NESBITT, M.A. London: H. K. Lewis. 1902. Pp. 32. Price 2*s.*—In this pamphlet Dr. Kuhn gives a short description of observations which he has made during a residence of five years in German South-West Africa in regard to a serum for inoculation against malaria. He first gives a description of a malady known as "horse-sickness," an acutely infectious disease affecting horses and mules in South Africa. He states that he has discovered a serum against horse-sickness which possesses the power not only of curing the disease in affected animals, but also of bestowing temporary immunity against future attacks. Dr. Kuhn maintains that malaria and horse-sickness have many points in common, and acting on this theory he has inoculated patients suffering from malaria with the serum obtained from horses suffering from horse-sickness. The results so far obtained are not very convincing but are sufficiently encouraging to merit a further trial of the treatment. Dr. Kuhn found that if the inoculation was made during a paroxysm of malaria the attack was relieved and also a certain immunity was conferred against future attacks. Unfortunately, owing to the vicissitudes and undeveloped condition of the colony it was not possible to conduct continuous observations on patients who had been inoculated, so that their subsequent history could not be obtained. Dr. Kuhn promises to publish his further experiences and it will be then more easy to judge as to the value of the serum which he has employed.

Colonial and Camp Sanitation. By G. V. POORE, M.D., F.R.C.P. Lond. London: Longmans. 1903. Pp. 43. Price 2*s.*—Dr. Poore is well known as an ardent advocate of common-sense sanitation, and in the little book before us, the contents of which are reprinted from his Milroy Lectures and "The Dwelling House," he has gathered together "matter which is applicable to colonial and camp sanitation." Dr. Poore writes as one who has tried the measures which he advocates and has found them successful. They do not of course pretend to be applicable to the town-dweller but we advise those who live in the country to give Dr.

Poore's methods a trial. When carried out with strict attention to detail their results seem to be admirable.

JOURNALS AND MAGAZINES.

The Practitioner.—The April number of this journal is not so well provided with good original articles as is usually the case. It contains, however, some careful records of interesting and instructive cases. Dr. S. Vere Pearson gives a thoughtful consideration of the differential points in diagnosis between croupous and catarrhal pneumonia in infants—conditions in which the prognosis is so dissimilar that accurate diagnosis is of the very highest importance. Mr. D. J. Armour in a review of recent surgery of the nervous system goes thoroughly into the question of the surgical measures for the cure of epilepsy and gives Sir Victor Horsley's valuable and concisely formulated views on the subject. Mr. Malcolm A. Morris, the late editor of the *Practitioner*, writes upon the light treatment of lupus and other skin diseases and amongst other articles are contributions from Dr. John Philips and Dr. Nathan Raw.

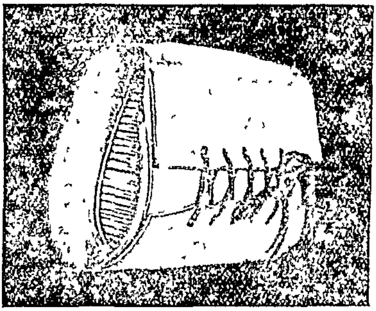
South African Medical Record. March, 1903. Price 1*s.*—We have received the first monthly number of this journal which is devoted to the interests of the medical profession in South Africa. Mr. S. W. F. Richardson contributes some remarks upon the Surgical Treatment of Appendicitis; Dr. G. A. Casalis deals with the subject of Curettage; Dr. W. E. Smith writes some notes on the Symptoms and Diagnosis of Iritis; and Dr. E. Sinclair Stevenson has a paper on Some Obscure Cases in Abdominal Surgery. Having regard to the non-success of some previous ventures in medical journalism in South Africa the editor is to be congratulated on his courage in starting a new journal. We hope his efforts will be rewarded with success.

Flora et Sylva. No. 1. Edited by W. ROBINSON. London: 17, Furnival-street, Holborn. Price 2*s.* 6*d.* net.—This is the first number of a new monthly review "for lovers of landscape, tree or flower," and the editor is one well qualified for his work, for he is the author of that admirable book, "The English Flower Garden." The review is beautifully printed on paper which appears to be hand-made and most probably is so. The type is a well-cut "old-face" (in connexion with which the printers need reminding that the character "*b*" is another form of the more usual "*h*" and should not be confused with the character "*b*," as has been done), while the illustrations are admirable. Some of them are coloured and are notable instances of colour printing, others are actually woodcuts, and two which are relegated to a kind of appendix are process blocks. Everyone who loves a garden and is fortunate enough to possess one should read this new review in which we are glad to see a paragraph in praise of woodlands.

New Inventions.

A MODIFICATION OF ALLIS'S ETHER INHALER.

I BEG to recommend to the notice of the readers of THE LANCET a very useful modification in the form of Allis's ether inhaler, made by Mr. Robert Henry Lavender, one of the secretarial staff of the Liverpool Royal Infirmary, and daily used throughout the surgical department of that institution. Hitherto the cage-like frame upon which is wound in and out a long strip of flannel or stockinette bandage to hold the anæsthetic liquid, has been covered up in a large rubber tube slipped over it but not easily moved off and on. To facilitate cleaning and the easy frequent removal of the rubber cover Mr. Lavender has had the latter constructed, not as a closed tube, but in the form of a sheet to lace on. The ends of the sheet overlap so as to be air-tight and are bound on the frame by lacing a couple of flaps attached to their outer side and provided with eyelets. The frame itself was many years ago improved by my colleague, Mr. F. T. Paul, who had it strongly made of wires attached at each end to an oval metal ring perforated with holes, into which the wires fit and are soldered in position. Thus made the frame can resist more than any pressure likely to be put upon it, and is a great improvement upon the form flimsily constructed of a mere sheet of metal perforated in slits and bent to the required form, but not rigid enough for the purpose.

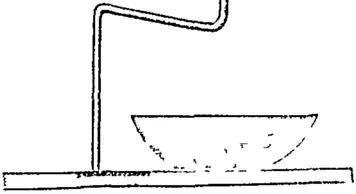


The inhaler is made for us by Messrs. Ewing and Co., Pembroke-place, Liverpool (adjacent to the hospital), and the accompanying illustration explains its details.

RUSHTON PARKER,
Professor of Surgery, University College, and Surgeon to the Royal Infirmary, Liverpool.
Liverpool.

IMPROVED LEG SUPPORT.

Apropos of the "Improved Leg Support" described by Dr. W. A. Carline in THE LANCET of April 4th, p. 974, perhaps the readers of THE LANCET may be interested in an apparatus devised by me for a similar purpose and now used in the out-patient department of Sir Patrick Dun's Hospital, Dublin. It consists simply of a light round iron bar bent in the manner shown in the illustration. One end bears a rest for the heel, the other being fixed to an oblong wooden base. This foot rest has the advantage that in cleansing the limb or applying lotion any superfluous fluid runs down to the most dependent point of the curve under which a receiver is placed. In practice it is found much more convenient than the old pattern, where the heel is supported right above the central pillar, along which fluid is liable to escape to the floor. Every part of the supported limb is accessible for dressing, bandaging, &c.



F. J. STRONG HEANEY, M.D. Dub., F.R.C.S. Irel.

Blackpool.

THE LANCET.

LONDON: SATURDAY, APRIL 25, 1903.

The Fourteenth International Congress of Medicine.

THE proceedings of the Fourteenth International Congress of Medicine, which are under the patronage of his Royal and youthful Majesty KING ALFONSO of Spain, were inaugurated on Thursday last, April 23rd, and will, it is hoped, prove successful in every way. As we have before now said, we do not regard medical or other scientific congresses as holding out much prospect of advancement to our knowledge. The day is to some extent gone by when it is of the first importance that medical men should meet face to face to compare their views or to communicate their researches in respect of disease. A voluminous and, on the whole, a responsible and well-informed medical press in every country provides a medium for the dissemination of professional knowledge and this being the case no medical man is for the future likely to withhold from his brethren any valuable discovery in order that he may make an imposing pronouncement to them at an International Medical Congress. The official programme of the Madrid Congress has not yet reached us, the dilatoriness of the officials of the Congress in the matter, to which we have referred recently, being this week made the subject of comment by our special correspondent at Madrid who, however, acquits them of blame in the trying circumstances. We understand that the promised proceedings do not include any papers which record startling therapeutic or pathological advancement. This was the case at Moscow on the occasion of the twelfth International Medical Congress, where valuable contributions to medical and surgical knowledge were read in many sections but where no marked innovation of theory or practice was recorded. If, however, those of our countrymen who attend the International Medical Congress at Madrid do not come away with any new learning—and many will find attendance at a crowded congress in a foreign capital far from conducive to their learning anything at all in the nature of scientific facts—they cannot help acquiring much valuable knowledge of life in general and the *vita medica* in particular by their visit to Madrid. The sights, the customs, the social observances, and the methods of living, no less than the hospitals, the libraries, and the courteous personalities of their hosts, will all serve to stimulate new sensations, to arouse new ideas, and to provide food for pleasant reflection afterwards. The visitors will acquire standards of comparison which will reduce in our countrymen the predisposition to dogmatise with which as a nation we are reproached. This alone will be a gain of inestimable benefit to members of a profession where so much depends upon the capacity of an observer to take an all-round view of a situation. Our special correspondent's letters do not foreshadow any great scientific reputation for the Congress in Madrid. The arrangements of organisation were not ready when the day of the opening of the Congress arrived, but had more punctuality been observed the city could not have been transformed into an ideal centre for a meeting of persons of all nations and languages, for it is a national capital, not a cosmopolitan business centre. The limitations of Madrid, however, have their advantages. In London, Paris, or New York a man of any civilised nation can find persons, probably persons of his own nationality, able to minister to the wants peculiar to his nation. Therefore he does not live the life of London, Paris, or New York, but rather his own national life with certain economic or climatic modifications. In Madrid it is only open to do as Madrid does, and a first-hand acquaintance with a foreign city is thus thrust upon the traveller, unless he proposes to sojourn at one of a small group of hotels where the prices appear to have been driven up to extortion pitch by the reprehensible and unpatriotic methods of speculators. This makes for the expansion of view that is so healthy for all who are absorbed in the practice of medicine, and for this reason alone the British visitors to the Congress at Madrid cannot help benefiting by their experiences.

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The Increase of Cancer and Cancer Research.

EVER since the KING publicly expressed his desire that the deplorable increase of cancer prevailing throughout his dominions should receive the earnest notice of the medical profession with a view, if possible, to the discovery of means for its prevention, the subject has engaged a large share of public attention. This is as it should be, for in such matters as the prevention of widespread diseases the medical profession expects the coöperation of the laity; but we notice with regret that since the issue of a report on the prevalence of cancer by the Registrar-General of Ireland the English daily press has been literally inundated with correspondence dealing with the causes and cure of cancer and proving nothing but the ignorance or the indiscretion of the writers. The publication of such letters at the present time can only hinder the due consideration of a problem the solution of which we desire, on behalf of suffering thousands, to see accomplished at the earliest practicable date.

Whatever may be the true explanation of the fact, the national records of England contain abundant evidence that in recent years the deaths attributed, rightly or wrongly, to malignant disease have rapidly increased both absolutely and in relation to population. It is a disquieting fact that as time goes on cancer contributes a larger and larger share to the total mortality and this is particularly the case as regards persons who have passed the meridian of life. From the report of the Registrar-General of England for 1900, which is the latest issued up to the present time, we gather that among women who have attained their forty-fifth year of age, as well as among men ten years older, cancer exacts a yearly death-toll vastly heavier than that which is levied by that other national scourge, pulmonary tuberculosis. It would therefore appear from statistics that thousands of those whom medical science has in these more enlightened days enabled us to rescue from premature death from tuberculosis are doomed, after a respite of only a few years to fall victims to another and more terrible destroyer. For many years previous to the occasion on which the KING gave expression to the anxiety felt on this subject by the entire thinking portion of his people, the terrible suffering which cancer was known to inflict on the inhabitants of our own and other countries of Europe had attracted the sympathetic attention of the foremost minds in our profession; and although pathologists have not as yet discovered the organism, if such there be, the study of the life history of which will enable us to do for cancer that which is happily at the present time in course of accomplishment for tuberculosis, nevertheless the medical literature of the last decade clearly indicates that much useful though unobtrusive work has been done which it is reasonable to hope will one day bear good fruit. The work has hitherto been carried out for the most part by individuals privately and amid the cares and responsibilities of medical practice; consequently there has been little opportunity of comparison with the similar work of other observers. Indeed, until very recently there has existed in England no organisation by means of which scientific results in cancer research could be collated and tested or their merits discussed. We have always entertained the opinion that, if a problem of such acknowledged intricacy as the origin of cancer is to have a chance of ultimate solution, well-directed and perhaps long-continued pathological study must go hand-in-hand with systematic clinical observations. But in order that this may be achieved it is necessary, *in limine*, that some highly trained experts free from the distractions of medical practice should be able to devote themselves more or less exclusively to research. In this country this has been impracticable until recently from lack of the necessary funds. The scheme inaugurated last year under Royal patronage for the scientific investigation of malignant disease has unquestionably been started on right lines. Under the control of the Royal College of Physicians of London and the Royal College of Surgeons of England the arrangements have been settled by men of high professional standing as well as of acknowledged competence in their respective departments and, always provided that a continuance of the requisite financial and scientific support can be insured, we think that the public may await the issue with some confidence. But money, perhaps much money, may be wanted for some time to come and the active coöperation of our great hospitals is also earnestly desired. The results obtained by pathological laboratories endowed for research work alone may be jeopardised by the absence of sources from which to draw their necessary materials. This is a matter to which we alluded upon the institution of the Cancer Research Fund and which we wish to bring before the profession again, so that all necessary assistance of the work may be forthcoming. The central bureau of observation must be fed from outside sources.

A special report upon cancer in Ireland by Mr. R. E. MATHESON, Registrar-General of Ireland, to the publication of which in blue-book form we referred briefly in an annotation in THE LANCET of April 11th (p. 1047), deserves, and will doubtless receive, careful consideration from the Cancer Research Committee as well as from the medical profession. The report is based on a considerable number of facts and opinions—mainly on the latter—concerning the incidence of reported cases of the disease in various districts and upon specified sections of the population of Ireland. It is replete with the impressions of individuals on matters of heredity and also concerning the supposed infectiousness and transmissibility from person to person of the various forms of malignant disease. We have now before us all the information obtainable from official sources as to the enormous disparity which is alleged to exist between England and Ireland as regards the fatality of cancer. But although highly interesting in itself, this report cannot be regarded as of much scientific value, for the information relied upon for its compilation is in many instances derived from non-medical sources; nevertheless it shows unmistakeably that what is believed to be cancer is increasing in Ireland as in other parts of the United Kingdom and that certain specified areas of Ireland suffer more severely than others. Inasmuch as we are satisfied that the Cancer Research Committee has already commenced its labours in earnest, we refrain from discussing the many questions affecting the origin and spread of malignant disease which are touched upon in Mr. MATHESON'S report. Such matters form the special province of the Committee and discussion of them at large is to be deprecated just now as possibly hampering the Committee. Members of the medical profession, however, may greatly assist the Cancer Research Committee by communicating to Dr. E. F. BASHFORD, pathologist to the Committee, at the Examination Hall on the Victoria Embankment, any clinical or other definite information in their possession on the subject of cancer. We further trust that they will advise both their patients and such friends as they can influence to take the same course, and in any case to abstain from rushing into print with ill-considered suggestions for the cure or the treatment of cancer. The Cancer Research Committee can collate and appraise the value of all facts or theories submitted to its notice out of considerable experience and because of great opportunities of comparison. The lay press, not having these advantages, invariably selects for publication the silliest, because the most sensational, stories. The speculations which followed upon the publication of the blue-book upon cancer in Ireland and which were reproduced broadcast in the newspapers were most unfortunate. There will be a legitimate opportunity for ventilation of the subject after the Cancer Research Committee has issued a report. Meanwhile we think that it is only fair to the Committee to which the question has been authoritatively referred to await its conclusions. These conclusions can only take the form of *ad interim* suggestions and further discussion will naturally follow upon their publication.

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Our Food-Supply in Time of War.

A ROYAL Commission has been appointed to inquire into all the circumstances affecting the importation of food and the raw material of food into the United Kingdom in time of war. The amount of the reserves of such supplies existing in the country at any given period will also be considered by the Commission which will have to advise whether it is desirable to take any measures other than the maintenance of a strong fleet by which our food-supply can be made secure and both starvation and starvation prices can be avoided. The names of the Royal Commissioners, which have been brought prominently before our readers in the daily press, will be found in another column. They include H.R.H. the PRINCE OF WALES and 17 gentlemen who are all qualified in various and unmistakeable directions to take and to weigh evidence in this most difficult and sweeping inquiry; but the absence from the Commission of a medical man and a chemist cannot but strike our readers as most unfortunate. The extreme importance that is attached to the proceedings of the Commission is proved by the nomination of the Heir Apparent to the Crown as a member as well as by the inclusion of so many men of first-hand knowledge in matters of transport, of commerce, and of statistics. But while it is obvious that these matters are the ones which will first come under notice and on which most of the evidence will have to be taken, it is no less obvious that the whole inquiry is so vast in scope that the consideration of many side issues must be imported into it. Some of these, though narrow in themselves, may prove to be, when followed up, the deciding factors in the answers given upon the main questions, and we think it regrettable that the country will not have the advantage at the deliberations of the Commission of the presence of men with a scientific knowledge of food and food-stuffs, who can speak as to the physiological and dietetic values of food whether manufactured or in the raw and who can appreciate some of the chemical problems involved in the transport and storage of edible products.

The conditions of this country in time of war, it being assumed that the war is one against a first-class power, are singular, in fact, we believe they are unique in the history of the world. Our soil at the present moment does not produce enough food to supply half our population—pessimists have put the fraction that could be fed much lower in the frequent communications that have been made public upon the subject—although the populations of Ireland and Scotland are small in comparison with their acreage. Even to obtain from the soil of Great Britain an adequate food-supply for half the inhabitants an adjustment of work would be required amounting to a social revolution. This being so, and everyone knows that it is so, the conclusion is clear that unless we could import food during war we should starve in an appreciably short space of time. This means, again as everyone knows, that we must have a navy so preponderatingly strong and a mercantile marine so efficient that whatever the force brought against us we could always insure the transport of food. As to what the measure of strength or the standard of efficiency implied may be probably no authorities are agreed, but the Commission embraces among its *personnel* men of varying shades of political opinion who are eminently calculated to obtain full information on such points because of their intimate acquaintance with the problems of imperial defence. Of course the first questions to be decided in what bids fair to be an elaborate study of the nature and working of the import trade of this country will revolve round the methods which it is possible to employ, both in ordinary circumstances and in emergencies, for the transport of food and food-stuffs. Upon such questions as the number of battleships necessary, the strength of the mercantile marine to be maintained, and the countries to be looked upon as the probable ones for the obtaining of different food and food-stuffs the Royal Commissioners are well informed and will therefore be able to elicit and to appreciate the testimony of others. All the economic and statistical complications likely to be comprised in an inquiry that has for one of its objects the avoidance of violent fluctuations of price will receive the attention of a Commission numbering in its body experts in such directions. For the due consideration of none of these matters is a medical voice required so long as food and food-stuffs are regarded simply as food and food-stuffs, *always* wholesome and edible because *sometimes* capable of supporting life. But every medical man and every chemist knows that to appraise food and food-stuffs in this manner and to assume that all edible material will travel equally well, keep equally well, and produce equally nutritive results, is ridiculous. If the report of the Commission is to supply the country with sound suggestions as to the proper steps to be taken to secure an adequate food-supply in time of war it is necessary that the qualities of the food and food-stuffs, as well as the measures to be adopted to maintain them in conditions of wholesomeness, should come under some discussion. Who is to assist the Commissioners to ask pertinent questions when such matters are on the *tapis?*

We regard the appointment of this Royal Commission as a most important national event and we must not be understood as desiring to thrust medical men into places where their views are not of scientific value simply with the desire to exalt our own profession. We are perfectly aware that such members of the Commission as the PRINCE OF WALES, with the experiences of his grand tour fresh upon him; as Sir ALFRED BATEMAN, Comptroller-General of the Commercial, Labour, and Statistical Department of the Board of Trade; as Colonel MONTGOMERY, President of the Liverpool Corn Trade Association; as Mr. J. E. STREET, the chairman of Lloyd's; as Admiral NOEL, the Duke of SUTHERLAND, Sir J. COLOMB, and Mr. CHAPLIN, can speak with vastly more authority than any medical man upon the broad questions. But the Commission will require, or ought to require, accurate information from witnesses upon details no less than upon broad questions, and some of those details will not be understood by any but men of exact knowledge with regard to dietetics and the nutritive value and chemistry of food-stuffs. If no evidence is sought upon such matters by the Royal Commission it will be tendered by witnesses none the less, because they will find it germane to the larger subjects: and its value will not be appraised. The Commission is provided, in the person of Dr. ERSKINE HOLLAND, with a professor of international law to speak as to the possible neutrality of food-carrying vessels; it is provided with an expert in banking to advise about violent fluctuations of prices; a practical farmer and a labour member of Parliament both are present, but there is neither medical man nor chemist. We think that it should not be too late to remedy the omission. An easy way to transport an ox would be in a tea-cup. An admiral can say how to guard the tea-cup, a banker can price it, and Lloyd's can insure it, but only a scientific man can say whether the substance in the tea-cup, claiming to be an ox, has the nutritive values of an ox.

Annotations.

"Ne quid nimis."

RITUAL CIRCUMCISION.

THE practice of ritual circumcision is too firmly established among the Jews to be done away with, even if that were desirable, but since the practice exists the operation should be carried out with the care and precautions of modern surgery. It is, however, frequently performed so unscientifically and so carelessly that the number of cases in which harmful results ensue is by no means small. It is true that these serious complications are most frequently seen in foreign countries, but of recent years East London and other parts of England have been so overrun with swarms of low-class foreign Jews that, as we might expect, we are meeting with similar results in this country. The chief dangers resulting from the operation of circumcision are hæmorrhage, sepsis, syphilis, and tuberculosis. Hæmorrhage is fairly readily controlled by pressure and should never prove fatal, except perhaps in cases of hæmophilia. Many instances have been recorded of fatal hæmorrhage occurring after circumcision in families of "bleeders," even though the umbilical cord has separated without any loss of blood. In one family four deaths occurred from this cause. In all these cases the tendency was inherited, as is usual in hæmophilia, through the mothers. In hæmophilic families it would be well to omit the performance of this rite. Sepsis is another important complication of ill-performed circumcision, but it is readily avoided by ordinary surgical methods. Fatal cases from sloughing and ulceration have been described. The other chief complications of circumcision are syphilis and tuberculosis and the inoculation of these diseases is chiefly due to an unpleasant method sometimes employed for stopping hæmorrhage. The bleeding surface is taken into the mouth of the operator and sucking tends to arrest the bleeding. The practice, perhaps, dates from the time when sucking any bleeding wound was looked upon as a suitable method of hæmostasis, for it is said to be no part of the rite as originally performed. However this may be the practice is in many respects highly objectionable. Even if we put aside as irrelevant in this connexion the æsthetics of the method, yet the dangers are by no means small In numerous instances syphilis and tuberculosis have been inoculated. The proofs are beyond cavil. The syphilitic manifestations have appeared in a group of children all circumcised by the same operator. There have been evidences of the primary sore and, chief proof of all, these children have in most cases affected their mothers who suckled them. There is equally certain evidence of the transference of tuberculosis. For instance, an epidemic of tuberculous disease of the inguinal glands has been found to occur in children circumcised by a rabbi affected with a tuberculous ulcer of the tongue. In one case in which the wound was not sucked syphilitic infection occurred from the operator whose mouth was affected ejecting wine from his mouth over the wound. It will be said that the practice of sucking the bleeding surface has been practically abandoned in this country. This is certainly true of the operation as performed amongst the better-class Jews, but the immigrating alien is generally less advanced and the practice still continues. Our attention has been drawn to the present state of ritual circumcision by a letter from Mr. M. Russell-Rubens who is the secretary of a society called the "Covenant of Abraham (Circumcision) Society," the object of which is to advocate that all circumcisions should be performed by a qualified medical man or under his immediate supervision, and the society hopes "to apply to Parliament to pass an Act safeguarding the lives and health of infants from the evil consequences of circumcision." Mr. Russell-Rubens points out that at present there is a large number of Russian and Polish Jews in London who were barbers or sweepers in their own country but who have taken to circumcision as a means of livelihood "with no qualification but extreme ignorance and filth." These Mohelim (circumcisors) dub themselves "Reverend" and proceed to practise without the authority of the Chief Rabbi who is supposed to appoint all operators. A discussion has recently been going on in the columns of the *Jewish World* as to the merits or demerits of these Mohelim and some of the latter have endeavoured to support their claims by asserting that qualified medical men have invited them to perform circumcision upon their Gentile patients, both adults and children. We have no means of verifying such an extraordinary claim but we have very positive evidence that one medical man at least does countenance them, for in the advertisement columns of the *Jewish World* we find an advertisement which contains a "testimonial" in favour of seven members of the London Mohelim Association. It is signed by a medical man who appends his qualifications "L.R.C.P.S. and L.F.P.S.G." It states that he has seen these seven members perform the operation of circumcision and that he has much pleasure in testifying to the ability displayed by each of them. Of course, it is possible that the advertisement was inserted without this gentleman's knowledge but that would not excuse the giving of such a certificate. Another advertisement in the same journal states that "surgical cases" are "attended to in Gentile families." We have said enough to show that circumcision as now practised is often performed in a careless manner, that there are many serious complications which may occur, leading to severe disease or even a fatal result, and that many of those who perform this rite are utterly unfitted by training for such a duty. We maintain that, since circumcision is an operation, it should always be performed by a duly qualified surgeon, or at least under his direct supervision. In no other way is it possible to have all the benefits of modern surgical practice.

DISHES FOR INVALIDS IN HOTELS.

HOTEL life is becoming much more common in London than it was 20 or 30 years ago. Whether the increased comforts to be obtained at hotels are the cause or the effect of this is a difficult question to answer, but there is no doubt that hotel managers are much more attentive than they were formerly to the comfort of their clients. We have recently received from Claridge's Hotel a little invalid menu and book of recipes for dishes suitable for invalids drawn up by Mary Nugent. These dishes are in use, not only at Claridge's Hotel, but also at the Savoy and the Berkeley Hotels. We think that this is a decidedly good move on the part of the hotel authorities, for the ordinary hotel menu is not suitable for an invalid requiring a light diet. The menu comprises broths, vegetable *purées* and soups, either *maigre* or with a veal or chicken stock, light dishes, such as soufflés, simple puddings, and such things as real calf's-foot jelly, lemonade, plasmon tea, and various cereal preparations. The recipes are simple and very good, but the last one is singularly cryptic: "Heat the teapot with boiling water, put in tea, then put one dessert-spoonful of plasmon on the dry tea-leaves; pour on boiling water (while boiling). The water must not have boiled previously."

We suppose that this last sentence means that the water must not have been boiling for any length of time previously, but there is certainly an Alice in Wonderland flavour about the paragraph as it stands. With this reservation, however, both the recipes and the system which gave them birth are to be highly commended. We may add that those persons, and there are many, who dislike "milky puddings" will find that freshly made bread sauce, eaten either hot or cold, is a most palatable substitute.

THE PARENT AND VACCINATION.

A CURIOUS dispute between a public vaccinator and the parents of a vaccinated child has recently been terminated by a special meeting of the board of guardians of the locality. The facts proved were as follows. One of the public vaccinators at Derby was informed that three children had been found suffering from small-pox in a street in that town. He went at once to the house and was told by the mother whom we will call Mrs. S., that a neighbour, Mrs. F., had been to the house on the previous evening and had also called that morning and had then inquired if Mrs. S. was going to be vaccinated. The public vaccinator proceeded to Mrs. F.'s address, meeting on the way the sanitary inspector, who accompanied him. Mrs. F. said to the inspector, in answer to a question as to what she was going to do about vaccination, "You know what my husband said last night." To this the inspector replied, "Yes, he was undecided"; and the medical man made the observation, "Well, you are running a great risk, you know. You had better be vaccinated." He then vaccinated Mrs. F. and her two-year-old child who he afterwards learnt had been in contact with Mrs. S.'s children, actually eating from the same plate as the infected children. Mrs. F.'s husband upon his return seems to have been extremely angry with his wife for permitting his child to be vaccinated and with the public vaccinator for performing the operation. The complaints which he made appear to have found support among the local anti-vaccinationists and had as their result the inquiry to which we have referred. It was alleged that Mr. F. had told the inspector that he refused to have his child vaccinated; that the public vaccinator knew of his objection; and was further informed of it by the wife who asked him to wait until her husband came home for his dinner; that he refused to do this; and further that he coerced and frightened her into consenting to her child being vaccinated by saying that she ran the risk of a fine as well as of small-pox. This story was distinctly inconsistent with the account given by the public vaccinator of what took place, and although his narrative was obviously the more probable version and his word was no doubt sufficient to convince many of his hearers, he was at the same time fortunate in having had with him a third person who was able emphatically to corroborate him in every particular. At the conclusion of the inquiry a resolution was carried by 31 votes to 1:—

> That in the opinion of this board the public vaccinator did not exceed his duty, that he is entirely exonerated from blame, and we consider that the charge against him is not proved.

In commenting upon the story which we have recounted the *Derby Express* sums the matter up by saying: "The incident throws an unpleasant light upon the difficulties which medical men have to fight in order to preserve the community from the scourge of small-pox," an expression of opinion in a lay newspaper which we cordially indorse. Before, however, the inquiry into the actual facts of the case before them was held an interesting discussion took place among the Derby guardians as to the duties of a public vaccinator in a case where to his knowledge a father objects to the vaccination of a child and the mother desires it. This question appears to have been raised on a previous occasion at a Local Government Board inquiry at Derby and a dictum of the president of that inquiry was quoted to the effect that no medical officer should vaccinate a child when the father objected "unless the mother gave him permission in writing." The Vaccination Acts speak always of "the parent," without specifying father or mother, and we observe that at the Local Government Board inquiry referred to it was also said that "the 'parent' is the father of the child when the father is alive." This is certainly in conformity with the usual view, *assuming that* the father has the child in his custody and control. In cases, however, where the mother summons the public vaccinator to vaccinate her child, or produces the child for him to vaccinate, he can hardly be expected to inquire whether she has her husband's authority to do so or not, nor should he be exposed to blame if, in such circumstances, he infers that he has "the parent's" sanction for his act. Let us, on the other hand, imagine a case in which the father has distinctly informed the public vaccinator, or any other medical man, that he absolutely refuses to sanction the vaccination of his child, and the mother, without any deception or concealment, asks the practitioner in question to vaccinate her offspring although her husband disapproves. In such a case as this we should say that the medical man, whether public official or not, would be well advised if he declined. We are not aware of any case having occurred which would illustrate what the ultimate consequences of his act might be, but the incident which we have described at Derby shows to some extent the kind of worry and annoyance to which he would undoubtedly be subjected.

PRESCRIBING IN THE LAY PRESS.

WE have frequently had occasion to comment severely on the baneful practice existing very widely in a certain class of newspaper of prescribing for such of their readers as are sufficiently credulous or ignorant to confide themselves to the therapeutic skill of the editorial staff. In such cases the diagnosis itself cannot but be doubtful, for it depends entirely on the patient's description of his symptoms, and the prescription can only be "a bow drawn at a venture." There is yet, however, a greater danger, the prescription is peculiarly liable to printers' errors and a very slight change in the dose prescribed may obviously have very important results. Of recent years there have appeared many penny weekly papers especially intended for ladies and nearly every one of these has a page in which advice is given on the mysteries of cosmetics. Much of the counsel offered is useless, even if harmless, but unfortunately the writers of these articles do not confine themselves to prescribing simple substances, but treat of the most dangerous drugs in an offhand manner which can only be accounted for by ignorance of their dangerous properties. A very typical example has recently come to our notice. There is a weekly paper called *Forget-me-Not*, intended for the perusal of girls, and a page is devoted to "boudoir gossip," where prescriptions for lotions and ointments are freely given. On this page in the issue of April 18th we find two flagrant instances of careless newspaper prescribing. In the one case a correspondent requires "a cure for pimples" on the forehead. She is told to "make up the following lotion and use frequently: One drachm of hydrocyanic acid, three drachms of glycerine; add enough water to make half a pint." There is not a word of warning as to the poisonous nature of hydrocyanic acid and nothing is said as to care in the custody of this lotion. It is by no means improbable that the patient, finding the "pimples" did not disappear, would augment the strength of the lotion in order to obtain a better result, *until* poisoning might be produced. Of course it will be said that in such a weak lotion as prescribed the hydrocyanic acid would be almost harmless, but even if this were so such a lotion should not be prescribed in lay papers. It might be thought that it would be impossible for the patient to obtain for herself the ingredients of this prescription but we fear this is not so. In spite of the Act poisons as virulent appear to be readily obtainable by the public. On the same page is given a prescription which can only be described as dreadful. A "Despairing One" asks, "Is there any remedy for enlarged pores?" and she is told *inter alia* to "make up the following ointment and apply to your face every night: one drachm of ointment of zinc, one ounce of nitrate of mercury, and four drops of creosote." The only pharmacopœial preparation to which the name nitrate of mercury can be applied is the liquor hydrargyri nitratis acidus, a most caustic application, so that if the prescription were dispensed as written a violent escharotic would be applied, with results horrible to contemplate. The paper would seem to be well named *Forget-me-Not*, for no one who essayed this treatment would ever forget the source whence it proceeded. Possibly the writer intended to advise one of the ointments of nitrate of mercury, but the prescription gives no hint to this effect and we cannot but take it that the risk of the prescription being used as written is very great. No pharmacist would dispense it as it stands, but there is always a chance that the recipient of this advice may prepare the application herself. Lifelong scars might be the result. It is from no feeling of professional jealousy that we draw attention to these unpardonable mistakes but from a conviction that all such uneducated and haphazard prescribing, even for cosmetic purposes, can rarely succeed in benefiting those who take the advice and may result in irremediable damage or may even lead to a fatal issue. We have referred particularly to one publication but it must not be imagined that the paper mentioned is necessarily a greater sinner in this respect than its contemporaries; they all err in venturing to undertake functions for which they are not fitted and we earnestly advise them to reconsider their position.

OPERATIVE TREATMENT OF FRACTURED PATELLA.

WIRING a fractured patella was suggested by Severini and seems to have been first practised in America by Rhea Barton, and a little later in this country by Cooper, but the results were unfavourable, *two out of five patients dying*; these results naturally led to the abandonment of the operation. After the introduction of antiseptic surgery wiring the patella was performed by Cameron of Glasgow and the operation has attained a wide popularity. The methods of wiring employed are numerous. Most commonly a single wire unites the broken edges but does not invade the posterior surface of the bone. Mr. A. E Barker has employed a method in which the wire passes vertically all round the bone, one portion lying between the patella and the femur and the other in front of the patella Circumferential wiring has also been done, and in this form the wire passes round the margin of the bone, piercing the tendon of the quadriceps above and the ligamentum patellæ below. All these methods give good results and the individual predilections of the surgeon usually determine the form which he adopts. In THE LANCET of April 18th, p. 1101, we published an account of wiring a fractured patella by Mr. B. C. Stevens of Mexborough, who urges that to obtain the best results two wire stitches should be employed, chiefly in order that passive movements of the knee-joint may be commenced early and thus stiffness avoided, but also because the two stitches hold the fragments together much more firmly than does a single wire. *There is much to be said in favour of the* double wiring and many surgeons employ it habitually, for a single wire has been known to give way, but the results of all the methods of wiring are excellent if asepsis be maintained.

MEDICO-LEGAL ASPECTS OF DEATHS UNDER CHLOROFORM.

AN action involving important issues has recently been decided in a Scotch court of session before a judge and jury. The facts as stated by the claimant were briefly as follows: Andrew Gillies, the claimant's late husband, suffered from some injury to his arm as a result of which adhesions had formed. He decided, after consultation with his own medical adviser, Dr. John Cunningham of Stewarton, to have an operation performed to remedy this. The widow further stated that although the deceased had taken a hearty meal—his tea—and in spite of his expressed reluctance, he was without any adequate preparation taken by Dr. Cunningham into a room and given chloroform. The man was placed on a couch and told to inhale the drug from a folded towel held by the medical man. He counted aloud to 30; the operation was performed and simultaneously Andrew Gillies appeared to have died from syncope. The only other persons in the room were the son of the deceased and another youth. In spite of artificial respiration consciousness never returned, nor indeed was there any appearance of revival. Upon the opposite side the evidence of Dr. Cunningham and Dr. J. C. Taylor, who was summoned when artificial respiration failed to resuscitate the man, was that Dr. Cunningham operated at the time he did at the express desire of the deceased and that he was under the impression that all necessary precautions as to diet, purgation, and so on, had been duly taken. As the learned judge in his charge to the jury said, the evidence upon certain plain matters of fact was absolutely divergent. The jury found for the defendant, Dr. Cunningham, so that Mrs. Gillies's plea for £1000 damages failed. The difficulties and exigencies of country practice add greatly to the anxieties incurred when an anæsthetic has to be administered, since from their very nature many precautions, and in many cases assistance, have to be dispensed with. When, however, it is realised that any practitioner may be called upon to face such charges as the one Dr. Cunningham had to meet too much care cannot be taken or too much importance attached to the use of so powerful a drug as chloroform. It was urged at the trial that the *deceased refused* to incur the expense of the services of a second medical man as "the operation was so slight." But surely any reasonable person can be made to understand that however trivial may be an operation the inhalation of chloroform involves the same risks whatever may be the surgeon's work. In self defence no medical man should consent to risk *his patient's life and his own* professional reputation by undertaking both to give chloroform and to operate. In view of the gravity of the issues involved medical men will in every case be well advised if, besides explaining what preparations are necessary before chloroform is inhaled, they will actually see that their instructions are carried into effect. We do not, of course, call in question any accepted method by which chloroform is given, but we may perhaps urge that at the present time, when *chloroform* is known to be dangerous in proportion to its concentration, the most precise methods should replace those which permit of the use of unmeasured doses. We congratulate Dr. Cunningham upon the only issue of the case which the circumstances warranted. But the evidence in this case possesses points of further interest. Several experts were called—Scotchmen presumably versed in the teaching of Syme and his following—and their *obiter dicta* are at once interesting and instructive Professor Carstairs C. Douglas (Glasgow) is reported to have estimated the mortality from chloroform as 1 in 2000, although he regards such fatalities as "uncommon occurrences." He stated that the essential cause of death was "syncope" and not asphyxia. Professor J. Glaister of Glasgow, speaking of his experience, stated that he had performed 30 examinations of bodies of persons who had died under chloroform within the last five years. In his view also death arose from cardiac syncope. This conclusion was the same as that at which Dr. Joseph Bell of Edinburgh arrived and in cross-examination Dr. Bell is further reported to have said that the too rapid administration of undiluted chloroform acted as a poison to the circulation and caused "syncope" and sudden death. Professor H. Galt of Glasgow was even more emphatic. In 13 post-mortem examinations which he had made on persons dying under chloroform he found every one had died from cardiac "syncope." We thus have admitted 43 necropsies upon persons dying under chloroform within one district of Scotland—a fact which appears almost to justify the assumption that even the methods employed north of the Tweed cannot be relied upon to avert what we have always impressed upon our readers is a danger whenever chloroform is used and whatever is the method pursued. It is matter of history, although history like other branches of learning is at times neglected in controversies, that Simpson believed and taught that chloroform killed in certain cases by causing circulatory paralysis, or, as he put it, by syncope. It is, however, not always recognised in London that the authorities on toxicology in Scotland accept Simpson's and reject Syme's teaching upon this important point. In conclusion we must draw attention to a portion of the admirable charge of the Lord Justice Clerk. In substance he said that the law in such cases was that a person was not liable in the exercise of his profession for a mere mistake or mere failure in some detail which might cause injury to another. To establish a claim there must be what in Scotland is called gross negligence, in England crass negligence. This is a clear statement of what is a matter of supreme importance to medical men. In the present state of our knowledge and in view of the imperfection of our anæsthetic appliances it cannot be too clearly put that a fatality under an anæsthetic need not, and we hope never is, the direct result of the carelessness or incompetence of the administrator and therefore does not place him in danger of being mulcted in damages for a calamity as terrible to him as to all others concerned. There is one more point. Much stress was laid in the claimant's pleading that the medical man had not in his possession at the time of the accident strychnine or ether to be used in emergency. It is certainly well worthy the consideration of all practitioners who undertake the duties of an anæsthetist that they should never be unprovided with such instruments and drugs as may in an emergency be required and which in some cases may turn the scale in the patient's favour.

MUNICIPAL INFANT MILK DEPÔTS.

THERE is no doubt that if the excellent system of providing municipal depôts for the supply of wholesome milk and milk of standard composition for the use of babies were universally adopted infant mortality would be enormously reduced. The experience of such places as St. Helens, Liverpool, and Ashton-under-Lyne, where such an experiment has been made, affords pretty conclusive evidence in favour of this view. A similar undertaking was begun in 1901 by the Battersea borough council and we have recently received a copy of an interesting report of the medical officer of health, Dr. G. F. McCleary, dealing with the working of this infants' milk depôt since its opening on June 5th, 1902, to the end of the year. The method adopted is that initiated by Dr. Léon Dufour at the Goutte de Lait, Fécamp, and consists in supplying sterilised cow's milk brought as near as possible to the composition of human milk in stoppered bottles, each bottle containing sufficient food for one meal and no more. The number of children being fed with this milk at the present time is about 360. Dr. McCleary puts forward evidence of two kinds that the Battersea depôt has justified its existence. Firstly, there is the testimony of medical practitioners who have had practical experience of the effect of the milk and, secondly, there is the evidence of statistics, though, as he adds, it is doubtful whether the full value of the work of the depôt can be expressed in figures. Taking all things into consideration, however, there can remain very little doubt of the influence for good gained by the adoption of the scheme. Thus from one table it would appear that the mortality of infants in the borough during the last six months of 1902 was 87·5 per cent. higher than the mortality in the depôt-fed children, whilst taking the mortality in east and north-west Battersea only the difference is no less than 103 per cent. We congratulate the borough council on taking this excellent step, showing as it does results of the highest hygienic importance and it is to be hoped that other municipal authorities will follow such a good example.

GREY'S HOSPITAL, PIETERMARITZBURG.

WE have received a pamphlet of 46 pages containing newspaper comments and correspondence with reference to the movement for the reorganisation of Grey's Hospital, Pietermaritzburg, which movement was commenced by the Pietermaritzburg Medical Society at a meeting held on August 12th, 1895. This society then passed a resolution in favour of allowing medical men to attend such of their patients in Grey's Hospital as desired their services instead of its being compulsory on such patients to accept the medical superintendent of the hospital as their medical attendant. This resolution was sent to the board of trustees for the control and management of Grey's Hospital, but the board's reply, which was received on Dec. 6th, 1895, was unfavourable. On August 4th, 1896, the society again communicated with the board, recommending (1) the promotion of the medical superintendent to the status of honorary consulting physician and surgeon and the appointment by the board of four or more additional honorary physicians and surgeons; (2) that the board of trustees should apply to the general public for additional funds for the hospital; and (3) that private paying patients might at their own cost have their own private medical men to attend them at the hospital, and also that nurses should be trained for attendance on patients at their own homes. This recommendation was referred to the Colonial Secretary in Natal who, on March 11th, 1898, replied stating that the proposed arrangement was not desirable under the present system of management of Grey's Hospital and that the Government saw no sufficient reason for any further representation to the board of trustees on the subject. On May 14th, 1901, the society (which had by that time assumed its present name of the Pietermaritzburg Branch of the South African Medical Association) petitioned the Governor of Natal making a variety of suggestions for the reorganisation of the hospital, some of them being that visiting physicians and surgeons should be appointed, that their term of office should be five years, that those patients who can pay ordinary medical fees should be in a separate ward and should have the privilege of being attended by their private medical man, that the training of nurses should be undertaken, and that the medical staff should be allowed to select two of their number to sit on the board of management. On Sept. 10th, 1902, a meeting, presided over by Mr. S. J. Mason, mayor of Pietermaritzburg, was held, at which a resolution was adopted embodying various recommendations, two of them being to the effect that the public should be invited to subscribe to the funds of the hospital, and that a complete scheme should be drawn up either for a new hospital or for enlarging the present one. A building fund was at the same time established and on Nov. 3rd a conference was held between the hospital board and a deputation from the building fund. The deputation inquired whether the hospital board would be willing to receive the assistance and coöperation of the executive committee of the building fund in the matter of providing a new hospital and whether the board would agree to its constitution being so altered as to admit of representatives of subscribers to the building fund having a voice in the management of the hospital. The board in reply passed a resolution as follows :—

> The board welcomes the coöperation and assistance of your committee but regret that they cannot accede to the request for the [illegible]

It may here be explained that the board which at present manages the hospital is elected partly by the town council and partly by Government, the Government contribution in aid of the expenses being £5000 a year. The local press speaks strongly in favour of the proposed reforms and reorganisation which are naturally supported by the medical men of the district. The medical members of the executive committee of the building fund are Dr. D. Campbell Watt, Dr. O. J. Currie, and Dr. W. Russell Strapp. Commenting on the present position of the controversy the *Natal Witness* of March 6th says: "We believe the desire and the intention of the Government is to place the hospital completely in the hands of one man who shall be directly responsible to them and to make of it yet another hide-bound Government institution in regard to which the public voice will stand for naught. ...... Under the scheme which the Government and the present dutiful board have in mind local practitioners will be precluded from visiting the hospital, which would be conducted on even narrower lines than hitherto."

THE PREVALENCE OF SMALL-POX.

A TELEGRAM from Barbados received at the Colonial Office on April 14th states that there has not been any further case of small-pox in Barbados since April 4th. In accordance with the provisions of the Quarantine Act clean bills of health are being issued. The Bradford and West Riding Medico-Ethical Union at a recent meeting approved of the following memorial to the President of the Local Government Board :—

> That in the opinion of your memorialists it would lead to the extension of the practice of vaccination in this country if Parliament were to enact that every duly qualified medical practitioner shall be put on the same footing in regard to the practice of vaccination as that on which public vaccinators now are. It is well known to your memorialists that many adult persons who refuse to visit the public vaccinator would have their children vaccinated and would be themselves revaccinated if this could be done free of cost to themselves by their regular medical attendant.

The Lancashire County Council has issued as a circular some admirable advice extracted from the report of the county medical officer of health dated April 16th. The portion extracted lays down the necessity of obtaining medical advice as early as possible and points out that vaccination and revaccination are the only means by which a person can defy small-pox. At the meeting of the Brantham rural district council held on April 14th a case of small-pox was reported from Barrowby. The case was that of a man who had been employed to clean a house from which a small-pox patient had been removed. The Barrowby man was an anti-vaccinationist but said that he was not afraid. However, he very soon sickened with small-pox. The Local Government Board for Scotland intimates that during the period from April 1st to 15th inclusive 3 cases of small-pox have been notified to it from the burgh of Dundee, 2 from the burgh of Leith, and 1 from the burgh of Brechin.

A MEDICAL CORONER FOR MANCHESTER.

WE understand that Dr. G. H. Darwin of West Didsbury, Manchester, is a candidate for the appointment of coroner for the city of Manchester which has been rendered vacant recently by the death of Mr. Sidney Smelt. Readers of THE LANCET know how persistently we have advocated the appointment of medical coroners—indeed, the movement to secure this office for a medical man had its origin 40 years ago in our columns. The coroner's inquest is an inquiry into the cause of death and in a very large percentage of cases the medical evidence as to this cause is the only evidence really essential to the finding of a true verdict. Surely a medical coroner can elicit such evidence from a medical witness and can instruct a jury upon its value in a manner that no layman, however skilled in the rules of evidence, can possibly do. We wish Dr. Darwin every success.

THE ASSOCIATION OF CERTIFYING FACTORY SURGEONS.

THE annual meeting and dinner of the Association of Certifying Factory Surgeons is to be held at the Hotel Cecil, London, on Friday, May 22nd. It is intended to make the dinner the occasion of a notable gathering of authorities on factory and workshop legislation and administration and it is expected that many Members of Parliament, Government officials, and persons prominent in dealing with labour questions will be among the guests. Mr. A. Akers-Douglas, the Home Secretary; Mr. Cochrane, the Parliamentary Under-Secretary; and Sir Kenelm Digby, the Permanent Under-Secretary of the same department; Sir John Batty Tuke, M.P., and Sir Charles Dilke, M.P., are among those who have already accepted invitations. In addition to the official guests many members of the association have expressed their intention to invite as private guests the Members of Parliament of their own particular districts. In this way a representative gathering should be secured.

CONTRACT PRACTICE IN THE COUNTY OF DURHAM.

A STRUGGLE which commenced just four years ago is still going on in the county of Durham, where an energetic medical union is striving to obtain an increased rate of remuneration for medical attendance on the miners and other workmen in the county. At some collieries there has been strong opposition to the increase of rates of payment to the medical men and the miners by advertising in the lay papers have been able to persuade medical men to accept appointments on the lower terms, thus ousting the previous medical men. A circular issued in March, 1899, by Dr. Edward Jepson, *President of the Durham Medical Union*, ran as follows :—

> We trust to the dignity and uprightness of our brethren in the profession that they will not take advantage of the offers made by the miners but in every way support this effort to obtain what is just.

To some extent this circular met the point, but certain medical men have, however, been found to fall in with the miners' views. A strong letter in our present issue from Dr. Jepson points *out that the position of these men cannot be recognised by* the medical union even if the miners should raise their salaries to the sum demanded by the union. They hold their posts by accepting terms which their predecessors have refused and they cannot again come health in the Catholic University Medical School, Dublin, and examiner in sanitary science in the Royal University, as delegate to attend the International Health Congress to be held at Brussels in September.

THE annual dinner of the Pharmaceutical Society of Great Britain will take place in the Whitehall Rooms of the Hôtel Métropole, London, on Tuesday, May 19th next, at 7 P.M.

THE Paris Société de Pharmacie has elected Dr. D. MacAlister of the University of Cambridge a corresponding member of the Society.

THE FOURTEENTH INTERNATIONAL CONGRESS OF MEDICINE.

(FROM OUR SPECIAL CORRESPONDENT.)

Madrid, April 17th.

STARTING from England, Paris is naturally the first stage on the road to Madrid, and here it must be confessed the Congress news was not encouraging. First of all, the French railway companies had never so much as heard of the International Congress of the Medical Press, but were quite ready for the influx of travellers desirous to attend the Fourteenth International Congress of Medicine. A reduction of 50 per cent. has been promised on the railway fares and is granted, but no congress should ever be satisfied with such an assertion, however correct in the literal sense. It is always necessary to go into details. In this instance the details are numerous and have in some instances proved fatal, for instead of reducing they have considerably increased the expenses incurred. The reduction undoubtedly is granted, but the intending traveller must not only possess all his papers in perfect order but when he presents them at the railway station he is told that they must be countersigned by the secretary of the Orleans Railway Company, not at the railway station, but at the head offices in the centre of the town, and that this will only cover the journey from Paris to Bordeaux. For the rest, from Bordeaux to the Spanish frontier he must obtain the signature of the Midi or Southern Railway Company, which is quite a different company and its offices are in another street. Further, if the intending traveller happened to be a French medical practitioner he was informed that the railway company secretaries would not give their signatures unless his papers were signed by Dr. Brouardel who until recently was dean of the Faculty of Medicine and is going to Madrid where he will preside over the French delegation. As might well be expected, Dr. Brouardel protested vehemently. He was not a clerk that he should be called upon to sign railway passes. It was no concern of his; why should he be expected to certify to the *bona fides* of every French medical practitioner? Such a work would require time and as a result the applications that were made to him involved a delay of at least 24 hours. So many were the complaints thus occasioned that one of the railway officials suggested that it might be avoided by the French practitioners professing to come from the French-speaking provinces of Belgium. It is in consequence of this suggested stratagem that an extraordinary number of members will appear to have arrived from Mons in Belgium. However, and in spite of every effort, it took at least four days to obtain all the necessary signatures. It is true that for the modest charge of one franc an agency undertook to attend to these formalities, but many do not care to trouble an agency from which they are not obtaining hotel and other tickets, and the agency itself was complaining about the amount of unrequited work thus entailed.

Dr. Blondel, as general secretary of the International Association of the Medical Press, has been striving to facilitate matters and has suggested that a special office should be opened at the Orleans station where all the formalities could be gone through at once and on the spot and thus the delay be saved of some four days in Paris. One of the two companies had assented to this when I left Paris. If the other company also agrees then the troubles described will cease to exist. In the meanwhile I had for travelling neighbour on the way southwards from Paris a member of the Congress who had come with his wife from Poland. He entered France at the frontier between Metz and Nancy. There no one knew anything about the Congress and any reduction on the fare was refused, but he did obtain a statement that he had paid full single fare and therefore vaguely hoped that somehow or other he would be allowed to return for nothing. In Paris he was treated most politely, but it took him the full four days to obtain the necessary signatures. During this time he calculates that he spent 250 francs and that the value of the reduction in railway fares that he obtained will amount to 120 francs, so that he is distinctly a loser by the transaction. Further, having thus lost four days he is no longer able to carry out an intended trip to Andalusia before the Congress meets.

Over and above these difficulties the most alarming rumours have been in circulation as to the exorbitant prices of the hotel accommodation in Madrid. My Russian fellow traveller had sent 50 francs to Madrid so that a room might be secured for him; the receipt of the money had never been acknowledged and he had not any idea whether any efforts had been made on his behalf. On arriving in the early morning at Madrid I found the agents at the station talking glibly of 60 and 70 pesetas per day for a room, that 6000 or 8000 members of the Congress were expected, and that there were only 3000 rooms available. In Paris I had been assured that out of 400 French medical practitioners who had enrolled themselves as members of the Medical Congress and had paid their subscriptions, only 160 were really going, the others being deterred by the fear of exorbitant charges and formalities and difficulties. All these rumours have a foundation of truth. There certainly have been difficulties and loss of time incurred with the companies, though this has been obviated by the travelling agencies when employed for that purpose. On the other hand, it is some of these travelling agencies that are, I was assured, responsible for the alarming rumours concerning the prohibitive charges made at the hotels. There are some six hotels at Madrid that are known to the travelling public all over the world. They are cosmopolitan hotels, such as may be found in any large town and where the traveller who, though abroad, wants to change his immediate surroundings as little as possible, will find much the same accommodation as exists in most other parts of Europe. Some agents made a descent upon these hotels and themselves hired the greater part of their rooms. Having thus secured a monopoly and made a "corner" in rooms they ran up the price to fancy figures. At the offices of the Congress I was told that Dr. Brouardel had been asked 200 pesetas per day for a room in one of the well-known hotels. Another delegate, an Englishman I believe, is actually paying 150 pesetas per day for one large room on the second floor in another of these hotels. Had the members of the Congress been able to deal directly with the proprietors or managers of the hotels they would have had to pay more than the usual prices but nothing like such extravagant charges.

All this is the more regrettable as after all there is no difficulty whatsoever in getting rooms and at reasonable rates. The organisers of the Congress appointed a long time ago a special committee to look after this matter under the management of M. Ulrich Frei. Any number of inhabitants of Madrid have been to this committee and offered one or two rooms in their own private houses, and these, together with the hotels and boarding houses that are not known internationally, suffice for all purposes. If it were necessary sleeping accommodation could be found for 10,000 visitors, and even according to the most sanguine expectations there will not be more than about 5000 Spanish and foreign members of the Congress. At the offices on the evening of April 16th the names of 2180 foreign members, who are to be accompanied by 630 ladies, had been inscribed. But it is quite certain that many persons who have paid their subscription will at the last moment alter their minds and not come. On the other hand, there are many others who never intended to come and will join only at the latest hour. According to one of the committee men in charge of the correspondence, &c., the number of members actually present at the Congress, counting both Spanish and foreign members, will not amount to 3000. As already stated the most sanguine scarcely count on more than 5000. Therefore there should be no difficulty about securing rooms and any extortion that has been practised has been due to "rigging the market" and not to any paucity of accommodation. This is a somewhat serious matter. If the representatives of the medical profession cannot meet without giving rise to a sort of conspiracy to extort from them

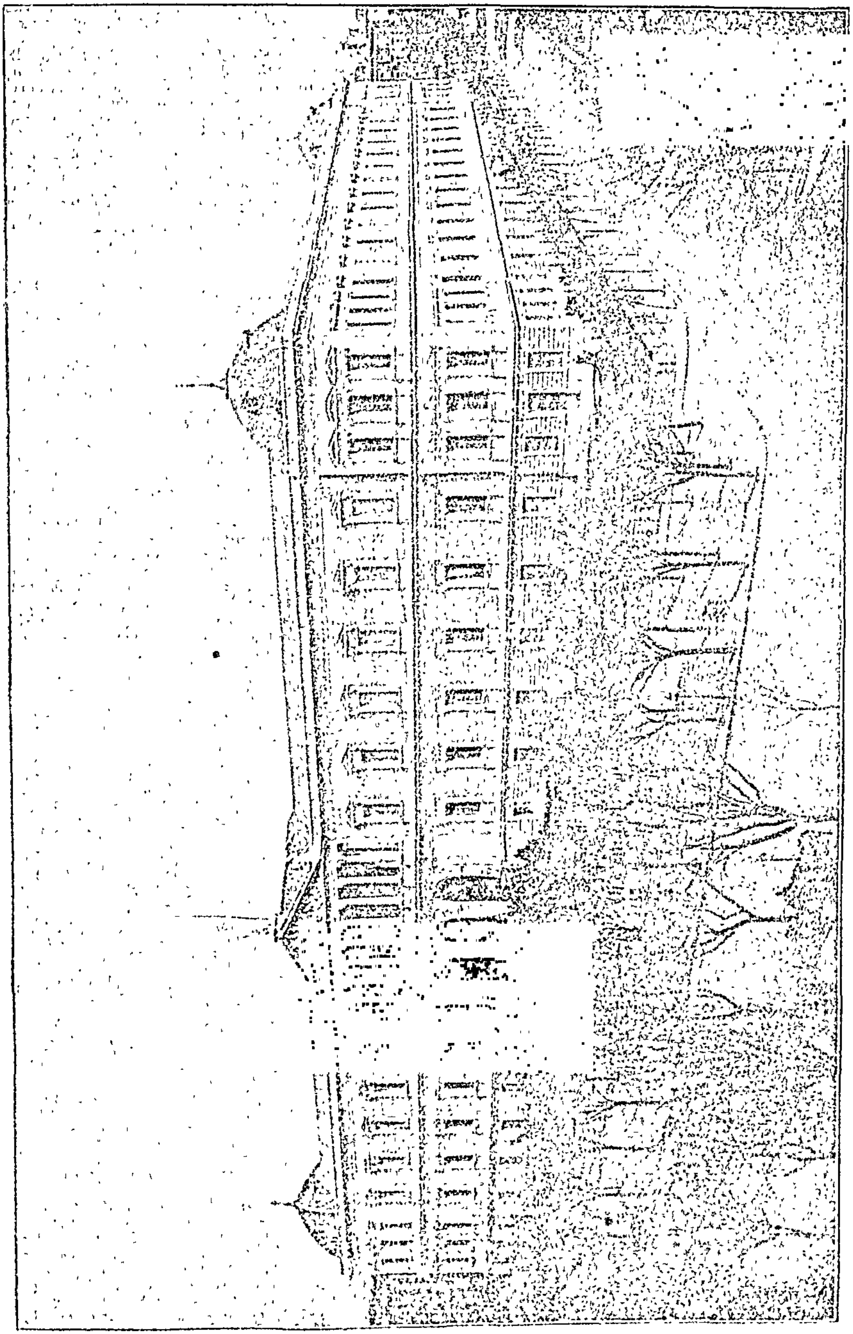


FIG. 1. The Royal Library and Museum, Madrid. The headquarters of the International Medical Congress.

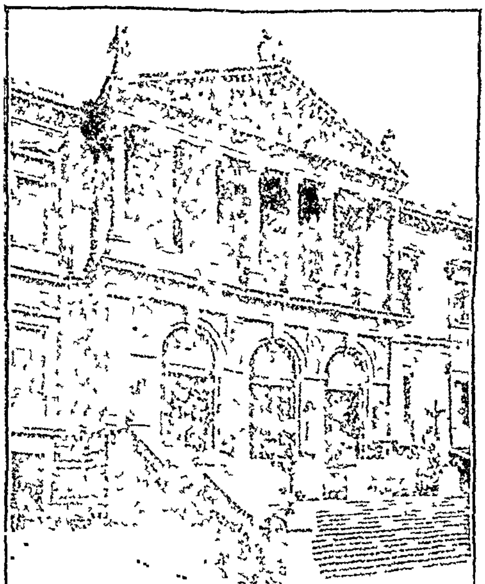
extravagant payments some measure must be taken to check such practices. Combination must be met by combination, and this to some extent is what has actually been done by the creation of the Service des Logements. I was pleased to find on arriving at Madrid that what was stated in THE LANCET on this subject in the issue of Feb. 14th (p. 456) has proved to be correct. Nor is this all. This Service will have its agents now at the railway stations to await the passengers and give them every help the moment they arrive and thus, if possible, prevent their falling into the hands of the harpies who are seeking unduly to exploit the situation. It only remains for the medical men to support the organisation formed by their fellow medical men of the reception committee and not be led into the toils of those who have sought to create a monopoly and then to practise extortion by pretending that there is no room.

Madrid, April 18th.

It has been not only a matter of difficulty to lodge satisfactorily all the members of the Congress owing to the reasons which I have just set out but it has also been very difficult to find a suitable meeting place for the Congress itself. There are 16 sections, each needing a meeting place of its own, and then there are all the offices, secretaries' rooms, &c., that likewise take up much space. Naturally the Faculty of Medicine seems an appropriate place for the holding of a medical congress. It is, however, an old building attached to a large and antiquated hospital at the far end of the Calle Atocha. This is a populous part of the town, the approaches are not of the best, and, in a word, it is not the sort of neighbourhood which the organisers of the Congress particularly cared to show to their foreign guests. Thus, while it was admitted as a sort of abstract principle that the Congress should meet at the Faculty of Medicine, yet everyone concerned was firmly determined that much better premises should be obtained. That this should be so was the more natural as a precedent had already been established in 1898, when the Ninth International Congress of Hygiene and Demography met at Madrid. Like the Ring Strasse at Vienna, so also at Madrid, there is a magnificent garden thoroughfare which constitutes the fashionable lounge and is known as the Prado. It is so broad that it holds several rows of trees, with gardens and fountains interspersed amid the junction of roads. Palaces, picture galleries, the monumental National Bank, and other splendid buildings line the sides of this, the Champs Elysées of Madrid. Among these buildings is the, comparatively speaking, new Palacio de la Biblioteca y Museos Nacionales. This enormous building was commenced in 1866 and concluded in 1894 On the ground floor there are the natural history and the archeological museums, while on the first floor there are a great number of palatial rooms containing the museum of modern painting and art. It was in these rooms and surrounded by splendid pictures that in 1898 the various sections of the Congress of Hygiene and Demography met. But there is also within this vast building the national library, containing some 30,000 very rare and valuable MSS. and more than 500,000 printed volumes. Here it is that the hitch in the arrangements has arisen. The chief librarian, as one of his enthusiastic admirers explained to me, is one of those remarkable men who may be seen perhaps once in 200 years. His knowledge of books is so extensive and minute that it can only be looked upon as marvellous. It seems as if he could not forget anything he has ever read and he will frequently also remember the page and the line where any particular passage occurs. To have secured the services of such a scholar as chief librarian is naturally most fortunate and all Spanish students are proud of their celebrated librarian Now this explains the difficulty in which the organisers of the Medical Congress found themselves. They wanted the Congress to meet at the museum ; but the librarian replied that the museum was in no wise connected with medical science, that students came from all parts of the world to study in the library under his charge, and that it was not right to disturb them. The objections that any other librarian might have made would probably have been set aside with but little scruple or hesitation, but in this case the great admiration and respect felt for so remarkable a person as the present librarian made the authorities hesitate and postpone the unpleasant task. At last, however, the librarian was sent for by the Government and given to understand that this was a question of international politics, that the premises belonged to the nation, and that the nation was anxious to give its foreign guests the best possible reception. So the librarian had reluctantly to consent to the closing of the library for a few days.

But now another obstacle had arisen. The museum, it will be seen, is a huge building, simple in character, with the exception that there are a projecting monumental entrance and central façade. (See Fig. 1.) Here are a flight of steps leading up to three splendid art ironwork doors. On the floor above are a colonnade and balcony and over this are some splendid sculptures. When the building of the museum was completed the sculptures were but partly done. The sculptor had much to do, the statues were being carved at Carrara in Italy, and there was no knowing when they would be completed. Therefore and so as not to spoil the general effect of the building, and, indeed, so as to be the better able to judge what this effect would be, plaster models of the proposed sculptures were put up and there they have been for some years. A few months ago, however, the statues were at last completed. They arrived at Madrid and were given up to the authorities. Of course the thought naturally arose that it would be well if the plaster models could be removed and the real sculptures put up before the Congress assembled. Señor Sagasta was then Prime Minister and a well-known architect, Señor Mariano Belmas, was asked if this could be done in time for the Congress. Though it would be necessary to erect very solid and elaborate scaffolding so as to take heavy statuary up to the height of the roof safely, still Señor Belmas undertook to do it all in time. The work was begun but shortly afterwards, as all the world knows, Spain lost one of her greatest statesmen—Señor Sagasta died. The Liberal party, deprived of his able leadership, collapsed and the Conservatives came into power. But Señor Belmas is not only an architect, he is also a Senator and was wont to vote on the Liberal side. Now it somehow happened that some difference arose between him and the sculptor. The Conservative Government thereupon informed Señor Belmas that he need not trouble about the matter any more as they would appoint some other architect to finish the work. All this concerns the Medical Congress because this policy of "changing horses while crossing the stream" has occasioned such delay that the scaffolding is still there, and it is doubtful whether it will be possible to get it all down before the Congress is over In the meanwhile the members of the Congress will have to enter the museum by some back doors instead of ascending the majestic flight of steps and passing under the art sculptures which have now just been hoisted into their places but are still hidden by the

FIG 2



Entrance to the Museum, showing plaster statuary.

surrounding scaffolding. This miscalculation and delay are characteristic, a little *cosa España* of itself.

FIG. 3.

Entrance as it is, with scaffolding erected before it.

Other more serious delays have also happened. The members of the Congress will not mind much by which door they enter, but many complaints have been made because the various reports which were to serve as the basis of discussion in the different sections have not been sent out. Theoretically, these reports should be circulated among the members of the sections whom they concern some six weeks before the Congress meets and they can then be studied and the members can prepare their criticisms. Thus carefully thought out arguments could be brought forward during the discussions at the meetings of the sections. This, however, has not been done. The reports are not printed and there is no likelihood of their being published till long after the Congress ends. This, however, is not the fault of the organisers of the Congress. The reporters who were appointed have, for the most part, delayed and postponed *doing the work, and finally nearly all the reports came in* together at the eleventh hour. It was simply useless to attempt to do anything with them. *Madrid is not a town* like Paris or London. In Paris there are a good many English compositors, and in London there is no lack of type-setters who can set up French manuscripts. This is not so in Madrid. Therefore the proofs have to be corrected and re-corrected over and over again. There is a circular now in hand which has taken more than two months to print and my informant had only just corrected what he hoped would be the last revise. Thus even to-day the definitive programme of the Congress is not yet printed and it will be fortunate if it is ready a few hours before the Congress begins. This is not altogether the fault of the organisers of the Congress, for the facilities that exist in great commercial centres such as Paris and London cannot be expected in a small and purely political town like Madrid *On the other hand, the members of the reception committee* are very much alert and are with never-failing courtesy ever ready to help and to advise the new arrivals.

Madrid, April 19th.

It is not one Congress but a whole series of Medical Congresses that is about to be held. This series will begin at 3 o'clock to-morrow afternoon, April 20th, when the *Minister of Public Instruction will open the International* Congress of the Medical Press. This Congress will meet at the Madrid University, and though it is said that no less than 100 Spaniards who claim to be connected with medical periodicals will be present the attendance from other countries will be small. This is due to some extent to the alarm caused by the rumours prevailing concerning the exorbitant charges made for rooms in Madrid, a question which I have already fully explained. In the evening the President of the Congress, Dr. Carlos M. Cortezo, will receive the delegates at his own house, and it is only on the Tuesday morning that the Congress will really get to work, when the general secretary, Dr. Angel de Larra, will read the correspondence and report on the general situation. In the afternoon of Tuesday there will be a further business sitting and in the evening the representatives of the medical press are to be received and entertained by the General Association of the Political and Literary Press. On Wednesday morning all business must be concluded, for there is to be a midday banquet, followed by the formal closing of the Congress, and then a reception at the town-hall and some representation at a theatre. As yet I only know of delegates coming from Belgium, France, Italy, Germany, Norway, and Great Britain.

Then on the Thursday the great International Congress of Medicine will begin, or rather the opening ceremony will be held in the Theatre Royal. The stage will serve as the platform where the King, the Queen Mother, the Ministers, and the principal personages of the Congress will be seated. The members of the Congress will occupy the floor of the great building, while in the boxes and galleries ladies and friends will be able to obtain a good view of all the proceedings. Many of the projected receptions and entertainments have already been announced. *Their Majesties* will throw open the palace to the congressists and there is also to be a Royal garden party. The Government and the municipality are likewise preparing entertainments for the members of the Medical Congress. But the definitive programme has not yet been published; indeed, the last details will only be settled to-day—that is to say, only four days before the Congress actually meets. *It will conclude on April 30th, but on* the very next day another Congress will commence. This is a congress of Spanish-speaking European and American medical men. The Spanish-American Congress, as it is briefly called, will only sit for two days. Finally, on May 3rd the fourth and last Medical Congress will meet. This is a purely Spanish national Medical Congress which is convoked to discuss questions of medical deontology or ethics. But somewhere amid these four Congresses there is to be a meeting of medical men and other persons who in some official capacity are concerned in the preservation of public health. The Deontological Congress will close on May 5th. Thus a whole fortnight is to be devoted to these four Medical Congresses. The population of Madrid will never before have heard so much about medical men and their concerns The daily papers are already publishing columns of personal details concerning the leading members of the forthcoming congresses, and yet in the midst of it all there is to be a general election and there are ugly rumours concerning hunger riots in the south of Spain It is perhaps not the least of the many *compliments medical science is* [illegible] during the course of the next few days. [illegible] and to make the members thoroughly welcome.

FOOD IN WAR TIME: A ROYAL COMMISSION APPOINTED.

THE King has been pleased to appoint a Royal Commission to inquire into the conditions affecting the importation of food and raw material into the United Kingdom in time of war. The reference to the Commission is "to inquire into the *conditions affecting the importation of food* and raw material into the United Kingdom in time of war and into the amount of the reserves of such supplies existing in the country at any given period and to advise whether it is desirable to adopt any measures, in addition to the maintenance of a strong fleet, by which such supplies can be better secured and violent fluctuations of price avoided." The following are the names of the Royal Commissioners:—H R H. the Prince of Wales; Lord Balfour of Burleigh (Chairman), Secretary for Scotland; the Duke of Sutherland; Lord Burghclere, formerly Minister of Agriculture; the Right Hon. Henry Chaplin, M P., formerly Minister of Agriculture; the Right Hon. J. L. Wharton, M.P., a director of the North-Eastern Railway; Vice-Admiral Sir Gerard H. C. Noel, who has commanded the Mediterranean Fleet and was a Lord of the Admiralty from 1893 to 1898; Sir John Colomb, M.P.; Sir Alfred Bateman, K.C.M.G., Comptroller-General of the Commercial, Labour, and Statistical Department of the Board of Trade; Sir H. Seton-Karr, M.P.; Mr. Henry H. Cunynghame, C.B., Assistant Under-Secretary of State, Home Office; Mr. E. Robertson, M.P., a Civil Lord of the Admiralty from 1892 to 1895; Mr. A. Emmott, M.P.; Mr. John Wilson, M.P.; Professor Erskine Holland, D.C.L., Professor of International Law, Oxford University; Mr. A. S. Harvey, of Messrs. Glyn, Mills, Currie, and Co., the bankers; Mr. J. E. Street, the chairman of Lloyd's; and Lieutenant-Colonel R. Montgomery, President of the Liverpool Corn Trade Association. Mr. W. H. Clark, of the Board of Trade, will act as secretary to the Commission.

MEDICINE AND THE LAW.

The Risks of Medical Practice.

THERE is a class of criminal charge which beyond all others is easy to make and difficult, or in many cases impossible, to disprove—we refer to charges involving unlawful carnal knowledge of females or indecent assault upon them. Accusations of this kind have also the peculiar feature that more than others they are liable to be made without any foundation whatever, either maliciously or because the disordered fancy of a woman or girl believes them to be true. Baseless charges such as these are by no means rare. They may be brought against men of any rank or calling, but, unfortunately for themselves, medical practitioners are more exposed to them than all others owing to circumstances incidental to the practice of their profession which are too obvious to require detailed explanation. With medical practitioners may be included dentists, not because they are called upon to make examinations or to perform operations likely to suggest the subject matter of a criminal charge, but because they are daily brought in contact with women of whose idiosyncrasies, mental and physical, they know nothing, and in their interviews with whom they are less likely than are medical practitioners to avail themselves of the presence of a third person. In THE LANCET of Jan. 31st, 1903, p. 344, it was suggested that if charges of indecency are to be sustained in courts of law without any direct corroboration of material particulars being insisted upon it will not be safe for a medical man to see patients alone. As a matter of practice evidence to some extent bearing out that of the prosecutrix is expected to be given in all cases of the class under consideration and in some it is specifically required by statute, but it is as well to point out that much of the corroborative evidence which is accepted as such at trials of this kind can hardly be said to bear directly or in any way conclusively upon the accusation made. Such testimony when there are no eye-witnesses and when there is nothing to prove that an alleged struggle took place usually includes the fact that the prosecutrix made a complaint to someone and stress is laid upon the question whether the complaint was made as soon as possible after the time of the supposed act. It is, however, by no means unlikely that the person making a complaint of an assault which never took place should make it immediately after the interview or meeting which may have suggested it to her mind and which in any case will lend colour to the accusation. Another class of corroborative evidence is that which medical men themselves are required to give. It, as a rule, consists in their being asked to make an examination of the sexual organs of a woman or girl and then to depose in the witness-box to conditions observed in them and bearing upon the charge made. In some cases extreme violence is alleged by the prosecutrix and the evidence of the medical man may negative this. In others it may tend to confirm the story she has told, but at the same time the presence of bruises or laceration does not necessarily prove that the accused person was the one who inflicted the injuries. At times, again, the medical evidence is confined to the fact that the condition of the parts examined is consistent with the female in question having had sexual intercourse at some time or other with a male person, and this circumstance, which obviously may be present when a woman has made a baseless charge against an innocent man, may weigh heavily against him in the minds of an uneducated and possibly prejudiced jury. The corroboration of the story of a prosecutrix in charges of unlawful carnal knowledge and indecent assault by evidence which is, strictly speaking, relevant to the issue to be tried may be difficult and in many instances impossible to obtain. This, however, is no reason why one person should be convicted of crime upon the unsupported word of another. If in the proof of material allegations a case is found to be one of "oath against oath" there can be no logical reason why the oath of the complainant should prevail over that of the person complained against if we assume each to enjoy equal good fame. It may be granted that one of two, the accuser or the accused, must be swearing falsely, but it must be remembered that if a charge of perjury were to be made in such circumstances no conviction would follow, for the unsupported oath of one man will not suffice at law to convict another of perjury. Two convictions for sexual offences upon the testimony of women which was not corroborated by any direct evidence have recently been referred to in THE LANCET.[1] In both of these the verdicts were arrived at with difficulty, owing to the divergent opinions formed by jurymen, and in neither of them was the trial held before a judge of the High Court of Justice. In particular the attention of the medical profession has been attracted by that of Mr. William Herbert Ray at Margate Quarter Sessions, in which the corroboration appears to have been reduced to the smallest possible dimensions. It may not be too late for the circumstances of this case to be examined by the Home Secretary and for the peculiar danger which it reveals to be very carefully considered by him. It may be regarded as typical of the risks to which medical men are daily subjected and for the avoidance of which no means appear to exist. It is hardly practicable for them to have third persons present at all their interviews with female patients, and unless some outcry is alleged to have been made, which must have been heard had it taken place, it is almost impossible for the accused to call any contradictory evidence other than his own. It is admittedly of the utmost importance that women should be protected from criminal acts and that those who commit such acts should be punished. Many criminals, however, escape conviction for all sorts of offences in the course of every year, and it is always reckoned as better that this should be the case than that there should be any risk of any innocent person being included among the guilty. In the case of sexual offences the danger of error is greater than when other criminal charges are brought, and when these offences are alleged against medical men the danger is immeasurably increased by the circumstances to which we have called attention.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8134 births and 4608 deaths were registered during the week ending April 18th. The annual rate of mortality in these towns, which had been 16·2, 15·8, and 15·6 per 1000 in the three preceding weeks, rose again to 15·9 per 1000 last week. In London the death-rate was 16·1 per 1000, while it averaged 15·9 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 7·8 in Croydon, 10·0 in Hornsey, 10·3 in Willesden, 10·4 in Stockport, 10·5 in Aston Manor, 10·6 in Barrow-in-Furness, 10·7 in Wallasey, and 10·8 in Coventry; the highest rates were 19·5 in Brighton, 19·7 in Bootle and in St. Helen's, 19·9 in Blackburn, 20·0 in Rhondda, 22·4 in Swansea, 23·5 in Wigan, and 24·4 in Sunderland. The 4608 deaths in these towns last week included 454 which were referred to the principal infectious diseases, against 489, 465, and 454 in the three preceding weeks; of these 454 deaths 165 resulted from measles, 91 from whooping-cough, 64 from diphtheria, 55 from diarrhœa, 34 from "fever" (principally enteric), 27 from scarlet fever, and 18 from small-pox. In 13 towns, including Brighton, Southampton, Northampton, Norwich, Derby, Stockport, Halifax, and eight other smaller towns, no death from any of these diseases was registered last week; while the highest death-rates from these principal infectious diseases were recorded in Tottenham, West Bromwich, St Helen's, Wigan, Rochdale, Burnley, Middlesbrough, Rhondda, and Swansea. The greatest proportional mortality from measles occurred in Tottenham, West Bromwich, Nottingham, Wigan, Manchester, Burnley, Middlesbrough, and Swansea; from scarlet fever in Rochdale, from diphtheria in Hanley, Walsall, Oldham, and Middlesbrough, from whooping cough in Tottenham, Portsmouth, Reading, St Helen's, Oldham, Rochdale, and Burnley, from "fever in Rhondda, and from diarrhœa in St Helen's Seven fatal cases of small pox were registered in Liverpool, three in Leeds, and one each in Croydon, Leicester, Manchester, Oldham, Rochdale, Bradford, Rotherham, and Cardiff, but not one in any other of the 76 large towns The number of small pox patients in the Metropolitan Asylums hospitals, which had risen from five to 16 at the end of the seven preceding weeks, had further risen to 33 at the end of last week, 22 new cases were admitted during the week, against five three, and five in the three preceding weeks The number of scarlet fever cases under treatment in these hospitals and in the London Fever Hospital on Saturday last, April 18th, was [illegible] from 1798 to 1664 on the five [illegible] cases were admitted during [illegible] d 158 in the three preceding [illegible] diseases of the respiratory organs in London, which had been 250, 238, and 234 in the three preceding weeks, rose again last week to 262 but were 36 below the number in the corresponding week of last year The causes of 61, or 1 3 per cent, of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner All the causes of death were duly certified in Croydon, West Ham, Bolton, Salford, Bradford, and 45 other smaller towns, the largest proportions of uncertified deaths were registered in Willesden, Birmingham, Smethwick Liverpool, Warrington, Sheffield, and Middlesbrough

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[1] THE LANCET, Jan. 31st, 1903, p. 344, and March 14th, 1903, p. 749.

HEALTH OF SCOTCH TOWNS

The annual rate of mortality in eight of the principal Scotch towns, which had been 18 6, 18 0, and 17 6 per 1000 in the three preceding weeks, rose again to 17 7 per 1000 during the week ending April 18th, and was 1 8 per 1000 in excess of the mean rate during the same period in the 76 large English towns The rates in the eight Scotch towns ranged from 7 7 in Perth and 11 8 in Leith to 19 5 in Greenock and 20·3 in Edinburgh The 681 deaths in these towns last week included 17 which were referred to whooping-cough, 17 to diarrhœa, eight to diphtheria, seven to measles, two to scarlet fever, and two to "fever," but not one to small pox. In all 53 deaths resulted from these principal infectious diseases last week, against 77, 57, and 64 in the three preceding weeks These 53 deaths were equal to an annual rate of 1 6 per 1000, which was also the mean rate last week from the same diseases in the 76 large English towns The fatal cases of whooping cough, which had been 25 in each of the two preceding weeks, declined last week to 17, of which 11 occurred in Glasgow, three in Edinburgh, and two in Dundee The deaths from diarrhœa, which had been 17, 14, and 11 in the three preceding weeks, rose again to 17 last week, and included nine in Glasgow, three in Aberdeen two in Edinburgh, and two in Greenock The fatal cases of diphtheria, which had been three, one, and three in the three preceding weeks, further rose last week to eight of which four were registered in Glasgow and two in Edinburgh The deaths from measles, which had risen from eight to 14 in the four preceding weeks, declined again to seven last week, and included three in Aberdeen, two in Edinburgh, and two in Dundee The mortality from scarlet fever and from "fever' showed a decline in each case from that recorded in the preceding week. The deaths referred to diseases of the respiratory organs in these towns, which had been 100, 121, and 93 in the three preceding weeks rose again last week to 109 and were 90 below the number in the corresponding period of last year The causes of 20, or more than 3 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN

The death rate in Dublin, which had been 29 3, 27 1, and 2[illegible] eeks, rose again last [illegible] past four weeks the d[illegible] the rates during the same period being 16 9 in London and 18 9 in Edinburgh. The 178 deaths of persons belonging to Dublin registered during the week under notice were six in excess of the number in the preceding week and included six which were referred to the principal infectious diseases, against 18, 15, and 16 in the three preceding weeks, of these, two resulted from scarlet fever, two from "fever," one from small pox, and one from whooping cough, but not one from measles, from diphtheria, or from diarrhœa. These six deaths were equal to an annual rate of 0 8 per 1000, the death rates last week from the same diseases being 1 7 in London and 1 6 in Edinburgh The fatal cases of scarlet fever, which had been two, two, and one in the three preceding weeks, rose again to two last week The deaths from "fever," which had been three, two, and four in the three preceding weeks, declined again last week to two In each of the last four weeks one fatal case of small pox has been registered The 178 deaths in Dublin last week included 29 of children under one year of age and 48 of persons aged 60 years and upwards; the deaths both of infants and of elderly persons showed a slight decline from the respective numbers recorded in the preceding weeks Four inquest cases and five deaths from violence were registered, and 59, or nearly one third, of the deaths occurred in public institutions The causes of six, or more than 3 per cent., of the deaths in Dublin last week were not certified

VITAL STATISTICS OF LONDON DURING MARCH, 1903

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 5 9 per 1000 of the population, estimated at 4,613 812 persons in the middle of the year In the three preceding months the rates had been 7 4, 6 5, and 6 2 per 1000 respectively The rates were considerably below the average in Paddington, Hampstead, Stoke Newington, Finsbury, Greenwich, and Woolwich, while they showed the largest excess in Hammersmith, Fulham, St Pancras, Hackney, Bermondsey, Wandsworth, and Deptford The prevalence of small pox showed a slight decline from that recorded in the preceding month, of the 13 cases notified during the month, three belonged to Chelsea, three to Stepney, two to Bermondsey, two to Camberwell one to Finsbury, one to Battersea, and one to the "Port of London The Metropolitan Asylums hospitals contained 13 small pox patients at the end of March, against 14 seven and five at the end of the three preceding months, the weekly admissions averaged three, which was the average weekly number in each of the five preceding months also The prevalence of scarlet fever showed a slight increase over that recorded in the preceding month, *this disease* showed the highest proportional prevalence in Fulham, Bermondsey, Wandsworth, Deptford and Lewisham The number of scarlet fever patients in the Metropolitan Asylums hospitals, which had been 2327, 1980, and 1820 at the end of the three preceding months, had further declined to 1704 at the end of last month, the weekly admissions averaged 208 against 236, 212, and 205 in the three preceding months The prevalence of diphtheria showed a slight decline from that in the preceding month, among the various *metropolitan boroughs this disease was* proportionally most prevalent in St. Pancras, Hackney, Bethnal Green Southwark Wandsworth and Deptford There were 903 diphtheria patients under treatment in the Metropolitan Asylums hospitals at the end of last month, against 981 936 and 1030 at the end of the three preceding months, the weekly admissions averaged 126, against 136, 131, and 152 in the three preceding months The prevalence of enteric fever last month showed a further decline from that recorded in recent months, the greatest proportional prevalence of this disease occurred in Kensington, Hammersmith City of Westminster, Bermondsey, Wandsworth Deptford and Greenwich. The number of enteric fever patients under treatment in the Metropolitan Asylums hospitals, which had been 210, 172 and 125 at the end of the three preceding months, had further declined to 92 at the end of March, the weekly admissions averaged 15 last month, against 30, 22, and 13 in the three preceding months Erysipelas was proportionally most prevalent in Hammersmith, Holborn, Finsbury, Shoreditch, Bethnal Green, and Battersea The 18 cases of puerperal fever notified during

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING MARCH, 1903.

(*Specially compiled for* THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1903.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON...	4,613,812	13	1213	821	7	135	2	18	385	—	2594	5·9		336	31	97	264	1	21	—	98	850	1·9	7025	15·9	125
West Districts.																										
Paddington	146,032	—	14	24	—	4	—	—	9	—	51	3·6	—	—	—	3	9	—	2	—	3	17	1·2	180	12·9	106
Kensington	178,409	—	45	14	—	7	—	—	14	—	80	4·7	—	—	1	5	21	—	1	—	6	34	2·0	267	15·6	165
Hammersmith	115,803	—	37	25	—	5	—	1	14	—	82	7·4	—	2	1	3	7	—	—	—	1	14	1·3	162	14·6	164
Fulham	147,780	—	65	19	—	1	—	4	17	—	106	7·5	—	—	1	—	10	—	—	—	3	14	1·0	174	12·3	118
Chelsea	74,169	3	15	16	—	—	—	—	4	—	38	5·3	—	1	—	—	6	—	—	—	1	8	1·1	118	16·6	138
City of Westminster	179,052	—	42	23	—	7	—	1	10	—	83	4·8	—	2	3	1	8	—	1	—	4	19	1·1	255	14·9	162
North Districts.																										
St. Marylebone	131,234	—	39	18	—	1	—	1	10	—	69	5·5	—	2	2	1	14	—	—	—	5	24	1·9	218	17·3	119
Hampstead	85,197	—	21	12	—	1	—	—	2	—	36	4·4	—	3	—	4	3	—	—	—	1	11	1·3	96	11·8	64
St. Pancras	235,716	—	74	60	—	6	—	2	25	—	167	7·4	—	24	2	3	23	—	1	—	1	54	2·4	350	15·5	113
Islington	339,137	—	82	46	—	5	1	1	22	—	157	4·8	—	18	4	5	31	—	1	—	11	70	2·2	473	14·5	143
Stoke Newington	52,069	—	7	9	—	1	—	—	2	—	19	3·8	—	12	—	1	2	—	—	—	—	15	3·0	78	15·6	160
Hackney	224,082	—	62	73	—	5	1	1	25	—	167	7·3	—	16	2	4	11	—	—	—	5	38	1·8	303	14·1	110
Central Districts.																										
Holborn	57,845	—	16	8	—	2	—	—	11	—	37	6·7	—	1	—	1	4	—	1	—	2	9	1·6	117	21·1	119
Finsbury	99,717	1	11	9	—	3	—	2	13	—	39	4·1	—	7	—	2	5	—	—	—	2	16	1·7	210	22·0	138
City of London	24,539	—	9	2	—	—	—	—	—	—	11	4·7	—	—	—	—	1	—	—	—	—	1	0·4	39	16·6	167
East Districts.																										
Shoreditch	117,513	—	23	10	—	4	—	1	16	—	54	4·8	—	18	—	1	7	—	1	—	1	28	2·5	236	20·9	137
Bethnal Green	130,028	—	22	30	—	3	—	1	22	—	78	6·3	—	14	—	4	5	—	1	—	2	26	2·1	229	18·4	111
Stepney	302,153	3	63	56	1	11	—	1	27	—	162	5·6	2	33	—	8	9	—	2	—	7	61	2·1	536	18·5	117
Poplar	169,550	—	27	32	—	6	—	1	11	—	77	4·7	—	64	—	6	16	—	—	—	1	87	5·4	338	20·8	149
South Districts.																										
Southwark	207,369	—	51	47	—	8	—	—	14	—	120	6·0	—	18	2	9	7	—	2	—	4	42	2·1	403	20·3	142
Bermondsey	129,801	2	57	16	6	6	—	1	13	—	101	8·1	—	13	3	2	4	1	—	—	2	25	2·0	236	19·0	107
Lambeth	307,711	—	72	44	—	8	—	—	16	—	140	4·7	—	20	1	2	21	—	—	—	14	58	2·0	469	15·9	148
Battersea	173,422	1	55	22	—	6	—	—	25	—	109	6·6	—	16	—	4	9	—	2	—	—	31	1·9	238	14·3	117
Wandsworth	249,678	—	91	65	—	10	—	—	18	—	164	7·7	—	13	3	10	10	—	1	—	8	45	1·9	314	13·1	121
Camberwell	265,562	2	83	37	—	7	—	—	15	—	144	5·7	—	10	2	8	10	—	2	—	8	40	1·6	391	15·4	114
Deptford	112,537	—	46	46	—	5	—	—	12	—	109	10·1	—	10	2	5	4	—	1	—	1	23	2·1	142	13·2	71
Greenwich	99,824	—	14	15	—	4	—	—	5	—	38	4·0	—	6	—	2	3	—	1	—	1	13	1·4	144	15·0	116
Lewisham	136,405	—	50	27	—	2	—	—	10	—	89	6·8	—	7	2	3	—	—	1	—	2	15	1·1	150	11·5	99
Woolwich...	121,478	—	20	15	—	3	—	—	3	—	41	3·5	—	6	—	—	4	—	—	—	2	12	1·0	159	13·6	113
Port of London	—	1	—	1	—	4	—	—	—	—	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

the month included four in Fulham, two in St. Pancras, and two in Finsbury.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in public institutions having been distributed among the several boroughs in which the deceased persons had previously resided. During the five weeks ending April 4th the deaths of 7025 persons belonging to London were registered, equal to an annual rate of 15·9 per 1000, against 18·2, 18·2, and 16·5 per 1000 in the three preceding months. The lowest death-rates last month in the various metropolitan boroughs were 11·5 in Lewisham, 11·8 in Hampstead, 12·3 in Fulham, 12·9 in Paddington, 13·1 in Wandsworth, 13·2 in Deptford, and 13·6 in Woolwich; the highest rates were 19·0 in Bermondsey, 20·3 in Southwark, 20·8 in Poplar, 20·9 in Shoreditch, 21·1 in Holborn, and 22·0 in Finsbury. The 7025 deaths from all causes included 850 which were referred to the principal infectious diseases; of these, two resulted from small-pox, 336 from measles, 31 from scarlet fever, 97 from diphtheria, 264 from whooping-cough, one from typhus, 21 from enteric fever, and 98 from diarrhœa, but not one from simple continued fever. The lowest death-rates from these principal infectious diseases were recorded in Paddington, Fulham, Chelsea, City of Westminster, City of London, Lewisham, and Woolwich; and the highest rates in St. Pancras, Islington, Stoke Newington, Shoreditch, and Poplar. The two fatal cases of small-pox belonged to Stepney. The 336 deaths from measles were slightly in excess of the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in St. Pancras, Stoke Newington, Shoreditch, Bethnal Green, Stepney, and Poplar. The 31 deaths from scarlet fever were only one half of the average number in the corresponding periods of the ten preceding years; this disease showed the highest proportional fatality in City of Westminster, St. Marylebone, Bermondsey, Deptford, and Lewisham The 97 fatal cases of diphtheria showed a decline of 102 from the corrected average number; among the various metropolitan boroughs diphtheria was proportionally most fatal in Hampstead, Bethnal Green, Poplar, Southwark, Wandsworth, Camberwell, and Deptford. The 264 deaths from whooping-cough were slightly below the average number in the corresponding periods of the ten preceding years; this disease showed the highest proportional fatality in Kensington, Chelsea, St. Marylebone, St. Pancras, Islington, and Poplar. The 22 deaths referred to "fever" showed a decline of 21 from the corrected average number; among the various metropolitan boroughs the highest fever death-rates were recorded in Paddington, Holborn, Southwark, Battersea, and Greenwich. The 98 fatal cases of diarrhœa were considerably in excess of the average; the highest proportional fatality from this disease was recorded in Kensington, St. Marylebone, Islington, Holborn, Lambeth, Wandsworth, and Camberwell. In conclusion, it may be stated that the aggregate mortality from these principal infectious diseases in London last month was more than 14 per cent. below the average

Infant mortality in London last month, measured by the proportion of deaths among children under one year of age to registered births, was equal to 125 per 1000. The lowest rates of infant mortality were recorded in Paddington, Hampstead, Hackney, Bermondsey, Deptford, and Lewisham; and the highest rates in Kensington, Hammersmith, City of Westminster, Stoke Newington, and City of London.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Staff Surgeon J. D. Hughes to the *Pioneer*. Surgeon A. D. Spalding to Chatham Hospital, lent Civil Practitioner W. E. Munro to be Surgeon and Agent at Burghead.

ARMY MEDICAL SERVICE.

Major and Brevet Lieutenant-Colonel M. W. H. Russell, R.A.M.C., to be a Deputy Assistant Director-General, on augmentation. Dated April 1st, 1903.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel W. A. May, C.B., to be Colonel, vice J. P. Rooney, retired. Dated March 22nd, 1903.

The undermentioned officers were promoted for service in South Africa, and not as stated in the *Gazette* of Feb. 24th, 1902:—Army Medical Staff: Colonel F. W. B. Hodder, retired pay, and Major H. L. G. Chevers, retired list. (*London Gazette*).

IMPERIAL YEOMANRY.

Royal 1st Devon: Surgeon Lieutenant M. B. Steuart resigns his commission. Dated April 22nd, 1903. North Somerset: Surgeon-Lieutenant J. G. D. Kerr resigns his commission. Dated April 22nd, 1903

VOLUNTEER CORPS.

Rifle: 2nd Volunteer Battalion the Queen's Own (Royal West Kent Regiment): Surgeon-Lieutenant G. R. F. Stilwell to be Surgeon-Captain. Dated April 22nd, 1903. 2nd Volunteer Battalion the York and Lancaster Regiment.

DEATHS IN THE SERVICES

Brigade-Surgeon Richard Thomas Lyons, I.M.S. (retired list), suddenly at his residence, Scrope-terrace, Cambridge, from angina pectoris, in his sixty-eighth year. He joined the army in 1860 and served in the Umbeyla Campaign, 1868, and was present at the forcing of the Pass and at the defence of Eagles' Nest picquet (mentioned in despatches, medal with clasp). He took part in the Lushai Expedition of 1870, in the Afghan War, 1878–79 (medal with clasp), and served with the Suakim Expedition of 1885 (medal, clasp, and bronze star).

Deputy Surgeon-General George Bankes Floyer Arden, A.M.D. (retired list), suddenly on April 1st at sea on board the *Zweena*. After joining the army as assistant surgeon he became surgeon in 1866, and retired with the honorary rank of deputy surgeon-general in 1879. He served with the 12th Regiment in the New Zealand War from July, 1863, to June, 1866 (medal).

Deputy Surgeon-General Joseph Furlonge Shekleton, I.M.S (retired), at his residence, Victoria-square, Clifton, on April 15th in his eighty-third year. The deceased entered the Indian Medical Service in 1845 and served with the 3rd Troop Bombay Horse Artillery in the Punjab Campaign of 1848–49, being present at the siege of Multan and the battle of Guzerat, for which he received the medal and two clasps. He subsequently qualified for the Assay Department and was assay master and acting mint master at Calcutta. After his retirement he lived at Clifton [illegible] was for about eight years secretary and house [illegible] to the Bristol Royal Infirmary. The deceased [illegible] valuable service to that institution and up to the time [illegible] death he took a great interest in all things connected [illegible]

"FRIGHTENING RECRUITS."

Under this heading the *Daily Mail* of Ap[illegible] attention to S[illegible] Gallery—the [illegible] have frequent [illegible] locating our recruiting buildings in good [illegible] positions and of making them bright and [illegible] War Office is desirous of attracting a really [illegible] of recruits into the army one of the first [illegible] is to provide a different class of building [illegible] are to be found at present in so many [illegible] large towns with the introduction at the [illegible] and more popular system of arrangement[illegible]

VOLUNTEER AMBULANCE SCHOOL [illegible]

The annual dinner of the staff [illegible] members of the school will take [illegible] Resta[illegible] May [illegible] medi[illegible] Giles [illegible] of th[illegible] Applications for tickets shou[illegible] president, Surgeon-Captain [illegible] 40, Connaught-square, Lond[illegible]

NAVAL MEDICAL [illegible]

At the quarterly meeti[illegible] Medical Supplemental Fu[illegible] Dick, K[illegible] (retired [illegible] £50 was [illegible]

Looking Back.

FROM

THE LANCET, *SATURDAY*, APRIL 23, 1825.

FOREIGN DEPARTMENT.

ANALYSIS OF FOREIGN MEDICAL JOURNALS.
REVUE MEDICALE—FEVRIER.

A remarkable case of Poisoning by Prussic Acid, with some Observations on the employment of Ammonia as a remedy.

Towards the latter end of August, M. B., a physician of Rennes, of a strong constitution, prepared some hydrocyanic acid, and was induced to take a portion, from which he felt no inconvenience. On the 3d of September following, at 11 o'clock in the morning, he took in some coffee almost a tea-spoon full of the prussic acid, prepared according to the method of Scheele. He found this stronger than his own, but still it had no material effect. At one he dined, and about seven o'clock in the evening he again took the same quantity as before, prepared by M. Delonde. He found this stronger than the preceding, but said, "Still it has no effect." He immediately left the apartment where he made this experiment, but scarcely had he advanced three steps in the street, when he felt a sort of shock in the head, which he considered as the precursor of some mischief. He collected himself, and said, "*Ma Foi*, it has done something ! Give me ——" and immediately fell, as if thunderstruck. *The first symptoms* were sudden cessation of the intellectual powers, trismus, difficult respiration, followed by cold extremities and stertorous breathing ; an odour of bitter almonds exhaled from, and distortion of, the mouth ; pulse scarcely perceptible at the left, but much stronger at the right wrist ; the face discoloured and swollen ; pupils fixed and dilated ; in short, in every respect similar to a man in the last stage of apoplexy. *Frictions, with the tincture of cantharides, and pure ammonia ; compresses soaked in the same mixture ; and large sinapisms were applied.*

The trismus increased, until at length a convulsive action took-place, greatly resembling opisthotonos, which lasted for some minutes. An iron spoon was slipped between the teeth, and, by means of a small opening, a feather was introduced as far as the throat ; this stimulus excited nausea, and some black mucus was vomited. The essential oil of turpentine in some coffee was then given. Ice was also applied to the head. This treatment was persevered in for two hours and a half, when the patient evinced some return of his senses by the following words, "*I have taken prussic acid—I recommend my son to you—give me air, and let me die.*" He likewise recognised some friends surrounding him. The intellectual faculties returned by degrees. There still existed a considerable dyspnœa ; sinapisms were applied, and a strong purgative enema administered, on the action of which, a large quantity of flatus was disengaged, strongly impregnated with the odour of prussic acid.

By six in the morning he was capable of being removed to his own house. On the 4th, slight febrile symptoms came on ; he also complained greatly of his mouth, which was intensely inflamed, and much ulcerated. Inflammation of the lungs supervened, but which was eventually removed, and on the sixteenth day after the accident, he was enabled to walk out ; and at present enjoys even better health than before the accident.

From the above circumstance it is evident that the prussic acid of the shops varies not only with respect to the intensity and rapidity with which it diffuses its baneful principles, but very probably in its component parts. In fact, M. D. tells us, that four drops of the acid prepared according to Scheele, had no other effect on him, than a sensation of constriction about the upper part of the pharynx, whilst the mere inspiration from a flask containing the acid which M. B. took, occasioned a great irritation about the top of the nasal passages, accompanied with pain in the head, and giddiness ; alcohol and pure *ammonia* immediately removed it. Dr. Murray has also found that ammonia, in the dose of a few drops, instantly dispels the severe headaches incident to those persons working in the laboratories where the prussic acid is made. This acid appears to act suddenly on the brain, by suspending the nervous influence, while the nerves of the spine still continue to act. It besides effects the organs of respiration, since the most formidable symptoms were those of very great oppression in breathing ; suppression of urine also lasted for four days.

From the impossibility of deglutition, M. D. recommends the introduction of a gum elastic sound into the nasal passages, through which the counter poison could be received in the stomach. He concludes by observing, too much care cannot be taken in selecting a medicine of such powerful and varied strength.

Correspondence.

"Audi alteram partem."

THE DANGER OF SELF-MEDICATION WITH TABLOIDS.

To the Editors of The Lancet.

Sirs,—The case of acute trional poisoning recorded in The Lancet of April 18th, p. 1096, is one which has very practical lessons, not only for the public, but also for the profession, at the present time. I have always maintained that the tabloid form of medicine was a snare and a delusion. Put up, as these products are, in beautifully designed bottles with labels bearing the prescription and directions in the plainest of English, they naturally aid the laity in self-treatment. Time after time I have been called to attend ladies who were suffering from the effects of what one must call "tabloid poisoning" for want of a better generic term. Sulphonal, opium, digitalis, strychnine, and thyroid extract are but a few of the drugs which I have found patients taking themselves in the form of tabloids and prescribing right and left to their friends.

If the medical attendant is so foolish as to order a bottle of tabloids for any particular patient he may rest assured that his patient will in future prescribe for himself and cease to trouble his medical adviser. It is all very well to say that the chemist always removes the tabloids from the original bottle and puts them up in a plain box with the physician's directions written on an ordinary stock label. The patient, somehow or other, soon finds out the name of the tabloids he is getting and also that he can obtain them more cheaply by going to a drug-store and purchasing a bottle of 25 or 100. The patient referred to in the case described in your columns knew that she was taking trional and also that from one to six tabloids was a dose. But surely 30 grains of trional are more than an average amount. We find that she had taken "two or three of the tabloids once before," and that she "thought they were quite harmless things." Time after time have I been told the same thing by patients who had been taking tabloids of thyroid extract with disastrous results.

Surely in view of the facts which I have stated we, as a profession, should discountenance the prescribing of tabloids for patients. If we cannot write prescriptions in the orthodox way it is high time we ceased to exist as a profession. I, for one, have never at any time ordered tabloids and never intend doing so. It would be interesting to have the opinion of the leading members of our profession on the subject, but meantime I trust that those who read the case of trional poisoning will bear it in mind as a lesson and a warning against the prescribing of such dangerous products as tabloids.

I am, Sirs, yours faithfully,
James Burnet, M.A., M.B., M.R.C.P. Edin.
Edinburgh, April 18th, 1903.

THE RISE OF BLOOD PRESSURE IN LATER LIFE.

To the Editors of The Lancet.

Sirs,—In his letter to The Lancet of March 28th, p. 920, Professor T. Clifford Allbutt says : "The pressure in any one capillary is, of course, infinitely small." He estimates the mean capillary pressure as about 50 mm. Hg and is therefore presumably using the term "pressure" in the ordinary sense as implying the force exerted per unit area, since this is the only sense in which pressure can be estimated by the height of a column of fluid If we use the term "pressure" in this sense it is impossible that the pressure in any individual capillary should be infinitely small, since it must be greater than that in the vein into which the capillary opens as otherwise there could be no flow of blood from the capillary into the vein The pressure in any individual capillary in a given area is the same as the mean capillary pressure for that area If, then, the mean pressure in a given area is 50 mm Hg the pressure in any individual capillary will, allowing for local variations, be of the same amount I venture to think that Professor Allbutt has misunderstood Dr Harry Campbell Dr Campbell *refers to capillary resistance and not to the pressure* As I understand Dr Campbell this capillary resistance is not the pressure but is the amount by which the pressure is lowered during the passage of the blood through the capillaries

I am, Sirs, yours faithfully
CHARLES POWELL WHITE
St Thomas s Hospital S E April 16th, 1903

OPERATION IN SUPPURATIVE DISEASES OF THE EAR

To the Editors of THE LANCET

SIRS —I have read with much interest Mr Charles A Ballance s paper as published in THE LANCET of April 11th p 1010 I do not propose to criticise his operation which he has taken such trouble to perfect I certainly agree with him that it is not for everybody to attempt I should be glad, however, if you would allow me to express a doubt as to whether all his opinions in this matter of suppurative otitis are well founded For a good many years I have devoted a considerable proportion of my time to the study of this disease and I know that the large majority of cases may be cured by treatment through the meatus if sufficient skill and attention be given. I have published from time to time some of the results of my system of antiseptic irrigation of the ear Further experience has confirmed my opinion as to its general efficacy, though I have found it necessary in certain cases to remove by operation the remains of the membrane which may be an obstacle to free irrigation I had doubts at first as to the safety of this proceeding but I find that the complete removal produces little or no disturbance in these cases I remove the membrane as completely as possible with the malleus and in some cases curette the attic And here I am at direct issue with Mr Ballance After the numerous operations which I as well as others have performed without any serious symptom having arisen I cannot agree with Mr Ballance s opinion that "such measures as curetting away granulations removal of ossicles polypi &c , are not only inefficient but dangerous In face of so much professional indifference to and ignorance of, ear diseases such a statement from a well known man may do a great deal of harm But we are to swallow the camel in the five hour operation of Mr Ballance and at the same time to reject the gnat in the common sense and often absolutely necessary minor operation of ten minutes duration As to the inefficiency of operations through the meatus, I can only say that 'I have been able to cure by such means several cases that had been under prolonged treatment by specialists without relief It is certainly true that there has been much inefficient treatment of the ear both with the syringe and the curette—and the same may be said of treatment with burr and chisel I have before now pleaded for more thorough methods and close personal supervision. Some of my cases are attended to three or four times a day and the *out-patients attend at the hospital daily for irrigation* These cases are kept under constant observation and therefore my statement that I have never observed extension of disease to the bone in case under irrigation should carry some weight. But passing on to cases in which through neglect the bone has already been diseased I think that each case should be studied on its own merits or demerits and that a routine resort to the complete operation is to be deprecated *I have certainly seen a good many cases recover after* what I am afraid Mr Ballance would call very partial operations and I can remember very few indeed which seemed to require the drastic removals advocated by Mr Ballance And after the most elaborate and exhausting of these radical operations the surgeon can never be sure that he has removed all disease In any case he will have to rely for cure on the vitality of the tissues which he has been good enough to leave Tissue vitality, when assisted by antiseptic irrigation, will sometimes effect what the boldest surgeon dare not attempt I have on four occasions removed the remains of the exfoliated cochlea through the meatus with large portions of the *petrous bone Three of these cases recovered* The fourth succumbed to whooping cough and pneumonia when nearly recovered of his ear disease

I am, Sirs, yours faithfully,
April 21st F FAULDER WHITE

THE BATTLE OF THE CLUBS

To the Editors of THE LANCET

SIRS,—With regard to an able article which appeared recently in THE LANCET by your special correspondent on the important subject of the organisation of the medical profession, more especially in the mining districts of South Wales, I consider the well written article an issue of the greatest value and importance to all medical practitioners in works districts I was in hope that such would have been commented upon by a senior medical practitioner in South Wales We, the medical practitioners in the mid districts of the Swansea valley, cordially met to arrange proposals for new conditions and methods of organisation We made an application to the chairman of the works committee of the various works also to the chairman of the directors, asking him to allow the clerk to deduct 3*d* in the pound of wages received under the old Surgeon's Truck Act in accordance with lists supplied by our collectors, for professional attendance upon the colliers and their families We, moreover, get an extra fee for midwifery cases and find no difficulty to obtain extra fees for such attendance. Previously medical fees were paid very unequally at different works for our professional services I may mention that I have only been two years in practice here and I was from the first very dissatisfied with such a method of payment Unfortunately, our application did not at first meet with the approval of the workmen, who turned out of one of the collieries one day owing to this matter , upon further consideration they returned to their work the following morning with the result that a deputation called upon one of the senior medical practitioners requesting that the medical fees should remain as before We would not con-
sent to any suc were
successful on all owing
to there being th of the
colliers The able article which recently appeared in your
valuable journal by 'hy
of perusal by all on
sideration regarding
I a
Gwys near Swansea ,

JACOBI'S ATLAS OF SKIN DISEASES—SMALL-POX AFTER VACCINATION · A CORRECTION

To the Editors of THE LANCET

SIRS —As the English translation of the above work is obtaining a considerable circulation in this country (which the general excellence of the plates fully justifies) I feel it is my duty, in the true interests of vaccination, to correct an unfortunate and inexplicable misstatement which appears under the heading of ' small pox Such an error in so important a work is calculated, if uncorrected, to lead to serious misapprehension

The representations of small pox in the work consist chiefly of reproductions of photographs six in number , the first four being of severe unmodified cases and the last two of very mild and highly modified cases In the letterpress, after the description of the first four photographs appears the following extraordinary statement (p 62) —'Although variola may undoubtedly occur occasionally in persons, who have been vaccinated with apparent success the disease is invariably modified and never assumes the more severe type illustrated in the preceding photographs. The rash is always scanty and sparse in distribution and the lesions soon dry up to form small brownish scabs.'

It is scarcely necessary to point out that such a statement is quite at variance with the real facts and although a defective knowledge of small-pox may be excusable in a German author it is certainly surprising that an English translator should have passed the statement without comment. That it was allowed to pass, however, seems to indicate that amongst medical men who have not had much practical experience of small-pox there is a somewhat exaggerated idea of the efficacy of vaccination. It is fully recognised nowadays that the protection conferred by vaccination lapses after a variable number of years and that too often small-pox, if then contracted, assumes an unmodified and possibly fatal form. I have myself seen confluent and entirely unmodified small-pox only ten years after vaccination, but such cases are fortunately very rare and quite exceptional. 20 years after vaccination, however, unmodified small-pox is by no means uncommon.

As regards the illustrations themselves, they are reproductions of photographs taken by me in the Birmingham epidemic, 1892–95. It is to be regretted that the author did not communicate with me before making use of them. He could then at least have made sure that he had the facts relating to them correctly. As it is, he states concerning the unmodified cases: "None of the four cases depicted were protected by vaccination," which statement, taken literally, is obviously quite true. But if the author intends to imply (as from the context it is clear that he does) that none of them had ever been vaccinated, then he is certainly in error. I have looked up my original photograph of Case xxxv. B. 1, which he describes as "an extremely severe case of confluent small-pox in a man, aged 23, on the tenth day of the disease," and I find the following note written on the back: "Ernest S——, 23 years, vaccinated, four marks, fair size and foveation; photo taken tenth day." I remember the case quite well as the poor fellow remained in hospital for an unusually long time owing to serious complications. The value of vaccination in conferring protection against small-pox *for a time* has been so completely established as to be beyond the pale of scientific controversy, but reckless statements such as the one in question in a presumably scientific work can only bring the operation into the gravest disrepute and go far to explain the bitterness of those who are opposed to it.

I am, Sirs, yours faithfully,

Town Hall, Leicester, April 6th, 1903. C. Killick Millard.

CONTRACT PRACTICE IN THE COUNTY OF DURHAM.

To the Editors of The Lancet.

Sirs,—For four years a struggle has been going on in the county of Durham to obtain increased remuneration for medical attendance on the miners. In some places the higher rate has been easily obtained, in other places there has been delay, whilst in a few places the struggle has been somewhat keen. At the present time in the outskirts of the cathedral city of Durham a very strong and bitter spirit is shown by the miners of this district. Having stoutly rejected the demand made by the local practitioner who had served the miners so well for some eight years, they obtained the services of an outsider; they canvass for him, they coerce their fellow-men to become his patients, and they sing his praises in every cottage; but after a time certain events happen which demonstrate very clearly that the skill displayed by the outsider is not all that may be desired.

The County of Durham Medical Union has quietly and very certainly made up its mind not to associate in any way with a medical man who tramples under foot all that is honourable in the profession. This union is heartily supported by all the consultants of the north of England. When miners strike for more pay and any men are found who are ready to work at the lower rate, they are dubbed "blacklegs," and are likely to be treated with much violence by those on strike. Medical men cannot resort to violence towards those who are willing to take the lower rate of pay (and so take away the practice of a medical man), but the only course they can adopt is to hold aloof as a body and a union and not in any way to associate with one who has lost all dignity and honour. The miners in this particular instance would fain compel the medical union to recognise and associate with the man of their choice without any regard to principles.

In the year 1899 I sent a printed appeal to the medical schools of Scotland and the North of England pointing out that a struggle was going on in the county of Durham for increased remuneration and we trusted to the dignity and uprightness of our brethren in the profession not to take advantage of the offers made by the miners. We think that this appeal was noticed in some way; at any rate, we have been assured that the students readily grasped the situation and expressed a loyal feeling. It is, however, disappointing to find that there are practitioners still existing who wish to be informed as to the principle involved; that if the miners should after a time give 9*d.* instead of 6*d.* per fortnight to the man introduced by them no opposition need be continued; that the dispute is now at an end. But this is not so; the dispute is not ended until the old practitioner is reinstated and the proper remuneration is settled. Again, some ask how long must this condition of strife continue. Our reply to this is the same as stated above—viz., so long as the old practitioner is opposed and the proper remuneration is withheld.

I have written all this at some length in order to explain clearly our position, and trusting to the good spirit of your readers that we shall have the help and sympathy of the whole of the profession.

I am, Sirs, yours faithfully,
Edward Jepson,
President, County of Durham Medical Union.

Durham, April 15th, 1903.

BLISTERING IN CHRONIC SKIN DISEASES.

To the Editors of The Lancet.

Sirs,—Dr. G. Norman Meachen[1] has kindly given the information which I failed to obtain from the latest dermatological text-books in my possession. I was not aware until now that vesication had ever been attempted with a view to eradicate psoriatic patches. It might interest Dr. Meachen to know that patient No. 3[2] is still under treatment by vesication, and that during the past fortnight several commencing patches of psoriasis on the face, back of hand, and at junctions of the ear and scalp have disappeared after *one* good blistering. When a patch is large and to all appearance stationary, it seems that liquor epispasticus has to be applied on two or three occasions ere any blistering effect is produced. I may add, in conclusion, that there has been no recurrence of psoriasis on any of the areas cleared by vesication.—I am, Sirs, yours faithfully,

John Wishart, M.B., Ch.B., B.Sc. Aberd.

Bedlington, R.S.O., April 18th, 1903.

ETHYL CHLORIDE.

To the Editors of The Lancet.

Sirs,—I wish to correct an omission in the printing of my article on ethyl chloride in The Lancet of April 4th, p. 952. The shortest case of anæsthesia in the 77 dental cases is stated to be 3 seconds, whereas really it was *30* seconds. This is an important difference. Perhaps I may be allowed to say that Messrs Duncan and Flockhart are now making pure ethyl chloride, free from methyl chloride, for inhalation. Thanking you in anticipation, I am, Sirs, yours faithfully,

Birmingham, April 20th, 1903. W. J. McCardie.

⁂ It will be seen on close inspection that the apparent error was due to a failure of the character 0 to print and not to its being left out.—Ed. L.

A PROTEST AGAINST *DIRT.*

To the Editors of The Lancet.

Sirs,—In these days, when the sterilisation of everything from milk to toothpicks and postage stamps is demanded, it gives one pause to notice the small concern there seems to be for cleanliness as opposed to filth. I allude to the absolutely disgusting circumstances attending the delivery of food in London. Meat and fish are frequently carried on open platters exposed to dust and dirt of all kinds. Bread is put in a basket slung over the carrier's shoulder, where it rubs against his not too clean coat. If he wishes to rest the basket is put down and for the better comfort of the carrier he sits in it, bread and all. The other day I saw an elaboration of this method, the boy sitting upon a loaf which he had taken from the basket and placed on the pavement. I may be faddy but I do not think I would want that loaf. To-day I saw a basket of rhubarb and green vegetables left on the sidewalk while the boy in charge of it was down an area. A dog coming along realised his opportunities and took full advantage of them. As in the case of the loaf, I would prefer not to eat those vegetables.

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[1] The Lancet, April 18th, p. 1126.
[2] The Lancet, April 11th, p. 1030.

Now these things are quite avoidable and should be prevented. Surely if in some cases meat and fish must be delivered on an open platter the articles might be wrapped in clean brown paper before leaving the shop. Shopkeepers might be a little more particular about their errand boys; and, above all, if the public expressed a decided preference for having their food delivered in a clean and decent manner they would soon have it so. In the cooking no doubt the risk of microbic infection is reduced to a minimum, but I am not inveighing against microbic dangers but against dirt—easily avoidable, entirely unnecessary *dirt*.

I am, Sirs, yours faithfully,
FREDERICK R. WAINWRIGHT.
Kensington Park-gardens, W., April 18th, 1903.

A SUGGESTION FOR THE MORE EFFICIENT CONTROL OF THE FOUL AIR OF SMALL-POX HOSPITALS.

To the Editors of THE LANCET.

SIRS,—In consequence of the increasing difficulty in finding suitable and convenient sites for the erection of small-pox hospitals and of the increasing alarm with which they are regarded by the inhabitants in the neighbourhood of their proposed erection the feasibility has occurred to me of a system of below-the-surface-level or underground wards, bath-, dressing-, and disinfecting-rooms, ventilated by an up-cast shaft and furnace, which in spite of some obvious drawbacks I still venture to bring forward. (The spent air might also be screened before passing through the furnace.) The other buildings, including a nurses' block (living- and sleeping-rooms), would be above ground as at present

A further question also arises on the score of economy and convenience: the possibility of building, within the same inclosure on the outskirts of a town, a fever hospital and small-pox wards (underground) worked by a central administrative block and staff, the nursing staffs, of course, being kept separate and distinct.

I am, Sirs, yours faithfully,
Preston, April 20th, 1903. WALTER F. MOORE.

TROPHIC AREAS AND THE INCIDENCE OF CARCINOMA.

To the Editors of THE LANCET.

SIRS,—From the report of the meeting of the Pathological Society of London [illegible] that I inferred that in s[illegible] by Mr. G. L. Cheatle the [illegible] of more importance as a [illegible] epithelial growths than the distribution of nerves and trophic areas. What I intended to convey was that it seemed to me in many instances of rodent growth about the face, and possibly elsewhere, that congenital clefts might be a factor of incidence, while nerve distribution might be a factor of limitation of extension. I see no reason why in this particular growth these two factors should not go hand in hand. I much regret that Mr. Che[illegible]ing to my suggestion.

Harley street, [illegible] ECCLES.

*** The following are the remarks in reply which Mr. Cheatle would have made had he had the opportunity of speaking.—ED. L.

MR. CHEATLE'S REPLY.

I presume that any epithelial cell is a possibl[illegible]

[illegible]

same time I admit that some of the cancers in these cases appeared in the position of clefts, but there were also cancers which originated where no clefts existed. I make no statement as to whether cancers [illegible] clefts than else- [illegible] the cell or cells [illegible] ndirect nervous [illegible], and this apart from all influence upon the spread of cancer.

THE SURGICAL TREATMENT OF PUERPERAL PYÆMIA.

To the Editors of THE LANCET.

SIRS,—I have read Mr. E. Michels's paper on the Surgical Treatment of Puerperal Pyæmia in THE LANCET of April 11th, p. 1025, with very great interest, as it is the first case reported in England that realises a suggestion of mine—viz., the ligature of the thrombosed vein in such circumstances. In 1898 I published a paper on Intravascular Coagulation in the Edinburgh Hospital Reports and in it the following remark was made: "During the earlier stage, in some cases of sepsis after labour or abortion, would it be practicable to explore the iliac veins and apply a ligature, as has been done so successfully in the case of septic thrombosis of the internal jugular vein?" This question has doubtless occurred to many others and everyone must congratulate Mr. Michels on the successful termination of the first case in this country.

I am, Sirs, yours faithfully,
Cambridge. J. CHRISTIAN SIMPSON, M.D. Edin.

THE CASE OF MR. J. W. AYRES.

To the Editors of THE LANCET.

SIRS,—Your readers will doubtless remember well the case of Mr. J. W. Ayres, L.R.C.P. Edin., L.S.A., of Farnworth-street, in this city. In the spring of 1902 Mr. Ayres was convicted of manslaughter and was sentenced to four months' imprisonment. Despite this conviction the General Medical Council allowed Mr. Ayres to retain his name upon the Medical Register and this decision was undoubtedly arrived at on consideration of the facts of the case. These facts were fully set out in your report of the proceedings of the December session of the Council which was reported in THE LANCET of Dec. 6th, 1902, p. 1587. Shortly, they were these. A man named Baines who had been in the service of Mr. Ayres was discharged for drunkenness. Three days later Baines came to the surgery, being intoxicated, and demanded to know why he had been discharged. Mr. Ayres ejected him and shut the surgery door and returned to his consulting room. Then noticing Baines's hat on the table went out into the street and gave it to him. As he handed the hat to him Baines put up his hand and Mr Ayres, in warding off what he thought would be a blow, caused Baines to trip and fall. Baines was able to walk home and received no medical attendance for six days. Then the parish medical man was called in and Baines was removed to the hospital Death took place on the tenth day after the fall. At the post-mortem examination a fracture through the sphenoid bone was discovered, while the kidneys and the heart were found to be markedly diseased. At the trial the jury found the prisoner guilty, but they asked for a lenient sentence on the ground that there had been the greatest provocation. Mr. Ayres was, however, sentenced to four months' imprisonment, notwithstanding that he had already been ten weeks in prison.

I am anxious to appeal through your kindness in the columns of THE LANCET to the [illegible] profession on behalf of Mr. Ayres [illegible] he has five children and a wife [illegible] his earnings. His health has been broken by his sentence and he has had to give up all night work. I ask for a generous response to an appeal on behalf of a sorely tried professional brother Subscriptions will be received and acknowledged by Mr. O Morley Roberts, 67, Lord-street, Liverpool.

I am, Sirs, yours faithfully,
Liverpool, April 18th, 1903. A. AYRES.

FREE ANTITOXIN TO THE MEDICAL PROFESSION.

To the Editors of THE LANCET.

SIRS,—In a recent issue of THE LANCET I see the statement that at Hanley antitoxin has been lately supplied free of charge to medical practitioners for use as a prophylactic in cases of diphtheria and that this is probably the first instance of the sort in an English sanitary area. The States of Guernsey have, however, done the same for the last three years and in this respect are apparently pioneers in preventive medicine.—I am, Sirs, yours faithfully,

April 6th, 1903. M.O.H. (Guernsey).

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[1] THE LANCET, April 18th, p. 1101.

DISCRETION IN PRESCRIBING.

To the Editors of THE LANCET.

SIRS,—The remarks of Dr. Nestor Tirard on hypnotics in THE LANCET of April 11th, p. 1022, excite an uneasy feeling whether the whole practice of prescribing does not need revision and reform. The general practitioner can get into a bad habit of hypnotising his patients with drugs, as this is easier and more often in demand than a carefully thought-out line of "masterly inactivity" or far-seeing *régime*, but he at least has it in his power to stay his hand if he makes his own medicines when the signals point to danger. The consultant, or he who does not dispense, on the other hand, once he has committed his directions to writing, which becomes the absolute property of the patient, ceases to be able to withdraw them from circulation or from repetition at the will of the patient. If we write a cheque we can "cross" it or make it "not negotiable," and almost everything that a lawyer commits to paper or parchment is safeguarded against abuse, and yet it is the medical man whose writing may spell, if abused, as it often is, either death or disaster beyond his ken. I do not know the precise legal aspect of a prescription, but why this *cacoethes scribendi* on the part of the prescriber? Why should he not make sure that his prescription shall be used only as he intends and by those only whom it is meant for? A general practitioner of my acquaintance who does not dispense secures this by sending all his prescriptions to a certain chemist with whom he has an arrangement that these should be copied out and retained, no charge being made to the patient by the chemist and no prescription ever repeated except by an order from the medical man. The plan works well for all concerned and is not very costly to the medical man and yet well worth the chemist's while. If necessary the chemist will send the medicine. But where ordinary prescribing is done, as by the consultant, why should he not initial and date his prescription and underneath add the letters s.q.n. ("sine quibus non [miscenda]")? If he wishes a certain number of doses to be taken before seeing the patient again he can order so many to be dispensed and the letters s.q.n. will warn the chemist to dispense no more until he is ordered by a fresh prescription or by re-dating or initialling the old one. An out-of-date prescription could not then be made up for anyone presenting it except, of course, at the chemist's own risk, and to do so would come to be regarded as "unprofessional" dispensing —in reality, illicit prescribing. If a consultant sees a patient sent to him by his medical attendant the prescription should be sent to the latter, not given recklessly to the patient himself. As illustrating the absurdity of present methods an old lady (now in her ninety-first year) was prescribed for some 20 years ago by an eminent man. A pill was ordered and a little whisky for her stomach's sake. The pill has been long discontinued, but the "stomachic" is still in use, and though the letter, not the spirit, has been departed from—for it now amounts to two gallons of whisky per month—steadily and regularly. The case illustrates the dictum that alcohol is "a *slow* poison," and any remonstrance is met by the answer that the prescriber was physician to the then Prime Minister. Verily "*verbum sapienti satest.*"—I am, Sirs, yours faithfully,

April 21st, 1903. CIRCUMSPICE.

A CORRECTION.

To the Editors of THE LANCET.

SIRS,—Dr. W. Mitchell of 21, Park-lane, Little Horton, Bradford, Yorks, has called my attention to the fact that the reference in my book entitled "A Third Pot-Pourri" to him as recommending vegetarianism to his patients is not warranted by facts and is calculated to injure his standing in his profession and affect his practice. I made the statement on the authority of another gentleman and did not, as I suppose I ought to have done, check the correctness of the information. I have already offered Dr. Mitchell my sincere apologies. Would you, Sirs, help me by inserting this letter to repair the error which my publishers will correct in all future copies? I am, Sirs, yours faithfully,

MARIA THERESA EARLE

Sloane-gardens, S.W., April 22nd, 1903.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Medical Charities.

HOSPITAL Saturday has been fixed for May 2nd, and the Red Cross Society, which is the workmen's branch of the Hospital Sunday and Saturday Fund, has issued an appeal to the public. Last year the expenses of the 20 medical charities aided by the Fund exceeded the income by £13,000, and the hope is expressed that this will be made good. The war is now happily over and there is nothing very special to divert public sympathy, but it will be a considerable step from £4171, last year's collection, to £13,000.

Coöperators and Convalescent Homes.

Some time ago a scheme for establishing convalescent homes by coöperators from societies in Lancashire, Yorkshire, and Cheshire was started. It was to be for the use of members of those societies in the north-western section. A home was to be established at Norbreck, near Blackpool, at a cost of £25,000. This scheme was perhaps too ambitious and it was opposed by some large societies in the section, so that it has been abandoned. A largely attended conference of coöperators met, however, on April 11th in Manchester to consider the matter. In the discussion the principle of the establishment of these homes was unanimously indorsed and ultimately a motion was carried declaring in favour of the establishment of two homes, one in Yorkshire and one in Lancashire, at a cost of from £10,000 to £12,000 each, and urging the committee to prosecute the work in the most vigorous manner possible. It may be hoped that this attempt will fare better than the first did and it is satisfactory to see that the principle of self-help is not yet lost among the better sort of the working-classes. In a paper read by one of the members it was maintained that "such homes should, in his opinion, be provided, not only because of the material benefits they conferred, but as an exemplification of the higher moral duties of coöperators in helping the poorer and weaker brethren and freeing them from the necessity of asking alms from the employer and rich classes who mainly supported existing convalescent homes." If such ideas were more widely spread there would be less hospital abuse than now prevails. But if the new scheme is to succeed it must be more warmly taken up by the societies than the abortive one was, in which the total amount of capital promised towards the £25,000 required was £2766.

The Small-pox Epidemic.

Small-pox is still prevalent in Lancashire. In Burnley 35 cases have occurred in the last seven days, and extension of the hospital accommodation is being hurriedly carried on, as it is at present quite inadequate. There have been eight cases at Heywood, chiefly among school children. Three public day schools have been closed. In Oldham no fewer than 10 cases have been reported from the workhouse since Friday last. Another case has been notified in Manchester from an entirely new district. Two more cases have occurred in Salford, bringing the total to 100. Stockport was said to be free yesterday for the first time in four months.

Midwives and Death Certificates.

The following case, as reported in one of the Manchester papers, indicates a danger to the public likely to increase rather than to diminish as the result of the recent Act affecting midwives which seems to invest them with a *quasi*-medical position. An inquest was held recently in Manchester by Mr. L. J. Aitken, the acting coroner, respecting the death of a baby accidentally suffocated in bed. The mother stated that six other of her children, though living for periods up to 10 hours, had been certified for burial by the midwife. Mr. Aitken, therefore, had the midwife in question before him on April 17th. The coroner's inspector told the court that when he visited the midwife's house to warn her to attend she told him that "her position entitled her to give a certificate that a child was stillborn, provided that it died within 24 hours after birth." As her view of the rights and privileges of midwives may be shared by others, perhaps it would be well for the societies which give diplomas to midwives to institute lectures, examinations, and diplomas or certificates in medical jurisprudence so that the *protégées* may be guarded against very serious errors. However, when before the coroner she said that that was not her meaning "What she did say, or should have said, was that she never gave any certificates for children born alive, but if a child did not live 24 hours she was always taught she had a right to give a certificate to the registrar" It would be interesting and instructive to know something more about her teachers in logic as well as jurisprudence The mother now also varied her statement, saying that she had had six children born alive A medical man's certificate was obtained for one and an inquest was held on another Mr Aitken then adjourned the inquiry, observing that there were still four children to be accounted for, and 'that he was determined to get to the bottom of the affair' In a certain section of the community very little value is attached to infant life and it is to be feared, to put it very mildly, that a good many midwives belong to that section Manchester, though not the worst does not hold a good position among the 76 great English towns as regards infant mortality, for, as Dr J Niven s last quarterly report tells us the deaths under one year were 181 per 1000 births during the quarter for the city, while in the old township of Manchester, which generally maintains a bad pre eminence, it was 198 per 1000 But if the death rate of this family represented the mortality of even the old *township, there would be a still more grievous loss of infant* life

Health Protection Budget

The estimates for the current year were presented yesterday at a meeting of the sanitary committee of the Manchester corporation The total expenditure anticipated is £84 283 The nuisance department costs £17,869, unhealthy dwellings £22 209, hospitals and infectious diseases, £43 023 Sale of Food and Drugs Act and Canal Boats Act, £1182 Last year however, the sum of £4312 of the estimate was not expended, so that when deducted from the current year s estimate the latter will be brought down to £79 971 The estimate of the cleansing committee for the year is £146 288 These are large sums, but Manchester is a great work a day city These committees do their work well and deserve the thanks of the community and if we count the cost of the safeguards of the public health it is worth while to try to picture the state of things if the work were not done.

The Scare as to the Pollution of Shell fish

To show the effect of the dread of typhoid fever from polluted shell fish, perhaps the following passage may be quoted from the report of the superintendent of the Lancashire and Western Sea Fisheries for the quarter ending March 31st last "Not only the weather but also the shell fish pollution scare has adversely affected the mussel fishery At Conway the demand fell off very considerably and many of the mussel gatherers took to line fishing for codling Mr Jones fishery officer, Carnarvon division, reports that the weight of mussels sent off by rail fell off as much as 50 tons per month as compared with the corresponding period of last year

April 21st

WALES AND WESTERN COUNTIES NOTES

(FROM OUR OWN CORRESPONDENTS.)

Llandaff and Dinas Powis Health Report

THE voluntary notification of cases of pulmonary tuberculosis has been in force in the Llandaff and Dinas Powis district for nearly two years but the medical officer of health of the district (Dr R Prichard) in his recently issued report states that the system is practically a dead letter, as he only received one certificate during 1902 although there were 16 deaths registered as due to the disease The medical practitioners of the district decline to notify unless the disease is included in the list of those compulsorily notifiable under the Infectious Diseases (Notification) Act In his remarks upon the treatment of patients suffering from pulmonary tuberculosis Dr Prichard says that there appears to be little prospect of a sanatorium being provided in the neighbourhood of Cardiff at an early date for the isolation and treatment of the poorer class of cases, but that as tuberculosis is an infectious disease the proper authorities who should deal with it are those who are empowered to build hospitals under Section 131 of the Public Health Act, 1875 It is of interest to record the fact that Dr Prichard, who has hitherto been subject to re election as medical officer of health every three years, has now on the suggestion of the Local Government Board been appointed permanently

Death of Dr James Mathias Phillips

Through the death on April 14th of Dr James Mathias Phillips the town of Cardigan has lost not only its oldest practitioner but also one of the most prominent and public-spirited of its inhabitants Dr Phillips was born in 1838 and received his medical education at the Middlesex Hospital and the University of Aberdeen, becoming M R C S Eng in 1861 and graduating as M D in 1867 He began to practise in Cardigan in 1873, prior to which year he was surgeon to the Morfa collieries and to the Port Talbot tinworks For many years he was Poor-law medical officer and public vaccinator to the Cardigan union and was at one time surgeon to the Royal Naval Reserve His professional work did not prevent his taking part in the public life of the town, of which he was at one time the mayor, he was also on the commission of the peace for both the county and borough The public funeral accorded him testified to the respect and esteem in which he was held by his fellow townsmen He is survived by his widow a daughter and a son who is the resident surgeon of the Kasr el Aini Hospital in Cairo

Appointment of County Medical Officer of Health for Gloucestershire

At the meeting of the Gloucestershire county council held on April 13th Dr J Middleton Martin was appointed medical officer of health of the county Dr Martin will retain his present position as medical officer of health of the Stroud urban and rural districts and will receive from the county council 50 guineas yearly for summarising the reports of the district medical officers and for reporting on the health of the county, he will also be paid a fee of two guineas for attending meetings of the council or its committees and of three guineas daily when he visits under the instruction of the council districts outside his own. The population of the administrative county at the last census was 331 516 an increase of 7536 persons over the previous census There are 13 urban (including one municipal borough) and 22 rural districts in the administrative county and there are 20 medical officers of health There was practically no opposition to Dr Martin's appointment, a motion to postpone consideration of the question which was proposed by one county councillor not even being seconded

The Causation of Typhoid Fever

At a meeting of the West of England and South Wales Branch of the Incorporated Society of Medical Officers of Health held at Stroud on April 16th Major Robert Caldwell R A M C introduced a discussion on the causation of typhoid fever apart from water supplies and instanced his experience while in charge of troops at Korosko, a small Arab settlement 800 miles south of Cairo The camp was in a high state of sanitary efficiency but no special precautions were taken with regard to the water supply and the troops were singularly free from sickness of any kind Six months later he was at Korosko again and found the tents had been almost entirely replaced by huts and that many comforts were now obtainable which *formerly* were unknown but typhoid fever and dysentery were rife the continual occupation of the ground in a district where vegetation was deficient most probably favouring the spread of the disease Major Caldwell's experience in South Africa strengthened his opinion that conditions other than water supply were considerable factors in the production of typhoid fever among the troops and he referred to instances in Natal where the disease followed the continual use of the same ground for camping purposes He thought it not improbable that a non pathogenic bacillus owing to the contamination of the soil might become virulent Although he considered it necessary to procure a supply of 'safe' water for troops on service he thought that disappointment would ensue if conditions other than the water supply were overlooked and among such conditions pollution of the soil should occupy a prominent place In the course of the discussion Dr D S Davies of Bristol said that he could quite believe that the typhoid bacillus might exist in a harmless form in virgin soil [illegible] unless the conditions described by Major [illegible] Newport [illegible] generally

Association of Public Vaccinators

At a meeting held recently at Weymouth under the presidency of Mr J R Philpots it was decided to inaugurate

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a Dorset branch of the Association of Public Vaccinators. Mr. Philpots was elected chairman of the branch and Dr. Lawson was elected secretary.

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SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Enteric Fever in Glasgow.

A REPORT has been presented to the health committee by the medical officer of health (Dr. A. K. Chalmers) submitting a report by Dr. F. Dittmar on the distribution of enteric fever in the eastern district of Glasgow from 1897 to 1901. Dr. Chalmers in his introductory report deals first with the increased death-rate from enteric fever during the period 1891–1900. This is shown by the following figures which give the average annual rate per million for the whole city for each quinquennium during 20 years: 1881–85, 325; 1886–90, 185; 1891–95, 198; and 1896–1900, 242. The higher death-rate in the latter periods, especially the last, was not due to the greater fatality in individual attacks but was associated, as is shown in the report, with the greater prevalence of the disease. It is many years, as Dr. Chalmers points out, since Buhl applied to enteric fever Pettenkofer's observations on the relationship between the level of the ground water and the incidence of cholera. In the present instance we have the suggestion that there has been some association between the increased prevalence of the disease and years of increased rainfall. Thus, while in the years 1891–96 the average annual fall was 36·1 inches, during 1897–1901 it was 41·8, and, further, the wettest years, 1897 and 1900, were each followed by one of exceptional prevalence of enteric fever. The prevalence follows rather than coincides with the rainfall in any given year, the prevalence being related not to the amount of rain which falls throughout that year but to the quantity which falls in the early months. Thus the increased rainfall during the years 1897–1901 arose almost wholly from an excess falling in the first half, but especially in the second quarter of each year, while the cases of enteric fever occurring in the third and fourth quarters formed 66 per cent. of the total yearly number, as compared with 60 per cent. for the same quarters of 1891–96, the earlier months of which were much drier. The relationship of the prevalence of the disease and rainfall, however, as is pointed out, is not a simple one and would appear to be influenced by prevailing temperature, especially in the second and third quarters. But temperature and rainfall are not direct causes and Dr. Dittmar undertook an investigation with the view of ascertaining what connexion might exist between cases of enteric fever which in point of residence had a local association. The eastern district of the city was chosen, partly for its considerable size in point of population and also because it afforded an opportunity of contrasting the behaviour of the diseases in houses supplied with water-closets with those where middens still existed. The following abstract from Dr. Chalmers's report will show some of the more important results of Dr. Dittmar's investigation. In his analysis the term "secondary infection" is restricted to cases occurring in the infected household within the accepted limit of the period of incubation, and he finds that the proportion of these is least in one-apartment houses. This, as he points out, is most obviously related to the almost uniform practice of removing cases in these circumstances to hospital. But leaving those which may be regarded as direct infections, he found that in 71 tenements in which the disease recurred after the period of incubation had passed the recurrence took place in 12 families living on the same floor as the formerly infected house and in 47 families living on different floors of these tenements. And in considering the incidence of these with reference to the methods of excrement disposal his inquiry repeats the experience which has directed the policy of the committee of health in this respect for years. Recrudescence of the disease occurred in 23 per cent. of the invaded tenements which were dependent on dry or conservancy methods of dealing with excreta, and in 6 per cent. only of those supplied with water-closets. Regarding the former class the policy is already formulated and only requires to be persistently followed. Every midden is a potential centre for the spread of enteric fever and the more recent knowledge that infection may be voided in the urine serves to emphasise the unsuitability of these structures for town populations. In the process of emptying it is impossible to avoid surface pollution, and disinfection of the surrounding area is rarely practicable. On the other hand, the association of a small proportion (6 per cent.) of recurrent cases with properly constructed water-closets suggests the lack of a right appreciation of the uses to which these fittings may be put and illustrations are still too frequent in many districts of their abuse. Apart from the repression of this habit the inquiry further points to an extended application of the processes of disinfection. A perusal of Dr. Dittmar's interesting report will supply all the details upon which these observations have been founded.

St. Mungo's College: Appointment of Professor of Midwifery.

Dr. Robert Jardine has been unanimously appointed by the governors of St. Mungo's College to the chair of midwifery. Dr. Jardine is a Doctor of Medicine of the University of Edinburgh, Member of the Royal College of Surgeons of England, Fellow of the Faculty of Physicians and Surgeons of Glasgow, and Fellow of the Royal Society of Edinburgh.

April 21st.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Irish Poor-law Medical Service.

THE Irish Medical Association has at last achieved a certain measure of success in its efforts to improve the wretched conditions under which the medical officers of dispensaries and union hospitals in Ireland perform their important duties. The newly elected and popular boards have not yet learned their responsibilities and are in frequent conflict with their medical officers. The guardians of Dundalk union advertised recently for a medical officer for Dundalk workhouse at a salary of £100. The Irish Medical Association had fixed £120 as the minimum salary. No applicants appeared for the post and a committee was appointed to reconsider the question. On that occasion the guardians were almost equally divided in their votes. A similar deadlock occurred some months ago at Carrickbyrne, when the two candidates for that dispensary refused to accept a less salary than £200. In last July the Edenderry board of guardians appealed against the decision of the county court judge on the question as to the amount that should be paid to a substitute or locum-tenent for his services. It appeared that by a resolution of the board of guardians it was decided to pay one week's leave at £3 3s., with permission to the medical officer to take a further three weeks' leave provided that he paid his substitute. Mr. Justice Madden, in referring to the portion of the resolution which provided that a dispensary medical officer could get only one week's leave on full pay said that it was "grossly unfair and entirely against the spirit of the Local Government Board's regulations." The latest important question between a medical officer and his board of guardians is now being tried in the *Nisi Prius* court, Dublin, before a special jury and with eminent members of the Irish Bar employed on both sides. In this case Mr. O'Shaughnessy, K.C., with whom was Mr. T. M. Healy, K.C., M.P., stated that the plaintiff, Mr. J. Patrick O'Riordan, dispensary medical officer, sued the guardians of Celbridge union in respect of salary which they had deducted and also in respect of the sanitary condition of the house in which they were by law enabled to compel him to live. After three days' hearing, when several important witnesses were examined—including Sir Gerald Drove, D.L., a former chairman of the Celbridge Union; Mr. D. Coady, consulting medical officer of health of Naas Union; and Sir Charles Cameron, superintendent medical officer of health of Dublin, &c., the jury found for the plaintiff, Mr. O'Riordan, £5 damages in respect of the condition of his house and £56 5s. in respect of the deductions from his salary as rent for the time that he was not in occupation of the house.

Ulster Hospital for Women and Children.

At the annual meeting of the friends of the Ulster Hospital for Women and Children, held on April 7th, it was reported that during 1902 231 cases were admitted into the children's wards and 1682 were seen in the extern department, while in the women's department there were 84 intern and 313 extern cases. The maternity nurse attended 151 cases. The total number of cases to which the hospital afforded relief was 2466. The hospital is in debt to the extent of £1900.

The New Royal Victoria Hospital, Belfast.

A great public meeting, promoted for the purpose of enlisting active sympathy in the adequate endowment and maintenance of the new Royal Victoria Hospital (which will be opened during the summer), took place on April 20th in the great Ulster Hall, Belfast. Mrs. W. J. Pirrie (during whose year of office as Lady Mayoress the idea of founding a hospital to commemorate the late Queen's Jubilee was started) presided, and there was an immense audience crowding all parts of the building and consisting of the leading citizens and of representatives of the commercial, professional, and industrial classes. Among the speakers were Mrs. Pirrie, the Marquis of Londonderry, K.G., Mr. G. Wolff, M.P., the Right Hon. T. Sinclair, D.L., the Lord Mayor, and the High Sheriff of the city of Belfast, representatives of the various churches and of the working classes, while the medical and surgical staff of the hospital selected as their speakers Dr. J. W. Browne and Professor J. W. Byers. Mr. A. M'Dowell, clerk of the peace for the city of Belfast, acted as honorary secretary of the meeting, and to him largely is due its very great success. The feeling of the meeting in reference to the support of the new hospital was in favour of making an increased effort to meet the additional expenditure, while all idea of putting the scheme on the city rates was scouted by those present. Mrs. Pirrie, before the vast audience separated, was able to announce that with the additional subscriptions she had lately received the total amount of the building and endowment fund of the new hospital was £139,249 3*s.* 4*d.* and it was expected that large additions would be made. From a medical point of view the new hospital will in its architectural arrangements be much in advance of, and superior to, any of its size in the United Kingdom, while, as pointed out by several of the speakers, it will be a very great gain as a factor in the Belfast Medical School. The very greatest credit is due to the Right Hon. W. J. Pirrie and Mrs. Pirrie for the splendid way in which they have managed to bring to such a successful issue this great scheme to commemorate the late Queen Victoria's glorious reign.

April 21st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Political Opinions of the Hospital Medical Staffs.

THE medical men attached to the Paris hospitals are greatly excited by a new move on the part of the administration. The youngest—that is to say, the most recently appointed—members of the medical staff have had to appear before the mayors of their respective *arrondissements*, there to answer questions concerning their political opinions and as to the schools to which they send their children. Never before have any such measures been carried out and the medical men consider that they are quite beyond the power of the administration. When, as is the case with these medical men, from 10 to 15 years have been spent in education and a severe examination has been passed it is hard that the confirmation of the appointment should depend upon the results of an inquiry into the political opinions of the nominal holder of the post. On all sides protestations are heard from those who consider that the medical men who care for the sick should be free to do their work and to think as they like in so far as their private life is concerned.

Sterilised Milk in the Treatment of Infantile Atrophy.

At the meeting of the Hospitals Medical Society held on April 3rd M. Variot pointed out the excellent results obtained by feeding young children upon milk sterilised under pressure at a temperature of 108° C. M. Variot gave as an example the case of an infant who when six months of age weighed onl [illegible] suffering from atrophy. [illegible] sed under pressure at a te [illegible] later the child weighed eigh [illegible] walk, and showed no signs of [illegible] in a period of eight y [illegible] of milk sterilised in [illegible] on 1500 children, and in no one of these was there any sign of scurvy.

Magnificent Legacy to the Assistance Publique.

The Assistance Publique has just received a generous legacy from M. Bigottini, a rich inhabitant of Auteuil. He left the Assistance his whole fortune except 200,000 francs which has been allocated towards the support of an asylum for persons suffering from tuberculosis.

The Treatment of Tetanus.

M. Bazy, who had been appointed by the Society of Surgery to report upon a case of tetanus under the care of M. Mauclaire, read his report before the society at the meeting held on April 8th. The patient was a man who 15 days after having been bitten by a horse had had his arm amputated at the shoulder-joint. Two preventive injections of anti-tetanic serum had been given on the day after the bite and one on the next day. [illegible] of tetanus. [illegible] by repeated [illegible] of serum wh [illegible] twenty-fifth day after the tetanic symptoms had appeared he was quite well. M Mauclaire has given details of 12 cases of tetanus in which there were 10 deaths and two recoveries. Arguing from the treatment applied in the two last cases M. Mauclaire considers that preventive injections attenuate the poison and that bleeding also plays a part in the cure.

April 21st.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Public Medical Services in Berlin.

A MEETING of medical men was recently held in Berlin at the instance of the "Free-choice" Society for the purpose of considering the various systems at present followed in the public medical services of the city, with a view to make suggestions for their improvement. In the result a petition containing recommendations on the following points was drawn up for transmission to the Berlin municipal authorities. 1. The arrangements for the treatment of patients under the poor-law require alteration. At present each poor-law district has one medical officer who is appointed by the municipal council and receives a fixed salary, but it is now suggested that the "free-choice" system which was extensively applied in club practice should be made the rule in poor-law practice also. The attention of the authorities was at the same time drawn to the fact that the late Professor Virchow had advocated this method as long ago as 1848 and that some of the smaller towns in Germany had already adopted the "free-choice" system for their poor. 2. Another recommendation referred to the medical and surgical staff of the municipal hospitals. The three great municipal hospitals—the Urban Hospital, the Moabit Hospital, and the Friedrichshain Hospital—contain respectively 631, 993, and 753 beds and are usually overcrowded almost all the year round. At the present time only two chief physicians and one chief surgeon are appointed for each of these hospitals, but there are, of course, a number of [illegible] surgeons. The consequence [illegible] with his assistants has to [illegible], a number which is evidently too great, and the petitioners therefore recommend that additional chief medical officers should be appointed to these three hospitals so that the number of patients treated by each of them should not exceed 150. Provision ought also to be made for special departments, which as yet have been formed only in the Royal Charité Hospital and in the university clinics but not in the municipal hospitals. 3 The next recommendation related to medical supervision of the municipal schools. In German towns and cities other than [illegible] the hygiene of schools an [illegible] for a long time been de [illegible] medical me [illegible] until three [illegible] as an expe [illegible] whom atten [illegible] to have passed the experimental stage and the system is to be extended to the whole city; 30 medical officers will be appointed at salaries of 2000 marks (£100) and each of them will attend seven schools. The duties of a school medical officer are somewhat heavy, including the supervision of the hygienic arrangements of the premises, careful examination of new pupils, selection of weak-minded and defective children for instruction in special classes, the making of the arrangements which become necessary in time of epidemics, and last, but not least, the preparation of reports for the school board. A medical officer who is anxious to do his duty must therefore either give nearly all his time to the school work (which is practically impossible on a salary of £100 a year) or else the amount of the work must be lessened. The petition of the "Free-choice" Society proposed that every girls' and boys' school should have its own medical officer and that the number of medical officers appointed should be 200 in place of 30. 4. The next paragraph of the petition recommends that the municipal authorities should appoint a chief medical officer as head of the entire medical service of the city of Berlin. He ought to have an adequate salary and it would be his duty in conjunction with his subordinates to advise the municipal council on questions concerning hygiene, water-supply, the construction and management of hospitals, infirmaries, and lunatic asylums, and other matters of a like kind. At present there is no medical man having responsibility in these particulars, the work being undertaken partly by persons possessed of no medical knowledge and partly by town councillors who happen to be medical men although they have not been elected to the council in virtue of their professional attainments. The majority of German towns have their recognised advisers in matters of public health and are provided with laboratories where bacteriological and chemical investigations can be carried on, but in the metropolis these conditions do not exist and when such investigations become necessary it is only by the courtesy of the heads of the university laboratories that they are made. 5. The concluding paragraph deals with the method of applying for appointments in the Berlin municipal service. After making an allusion to some unfortunate events which have taken place on the occasion of appointments becoming vacant in the municipal hospitals the petition recommends that canvassing should be strictly prohibited and that vacancies should be publicly advertised. Finally, the petitioners state that in the task which they have set themselves they have been actuated solely by regard for the interests of public health and not by any undue sympathy for the medical profession.

The Antipyretic Treatment of Typhoid Fever.

Professor Valentini, chief physician of the Deaconesses Hospital at Danzig, in West Prussia, has published in the *Deutsche Medicinische Wochenschrift* a very favourable account of the results which he has obtained in the treatment of typhoid fever with pyramidon. He points out that the treatment by means of cold baths, which has for many years been used almost everywhere, requires a fully trained nursing staff and therefore is not always available in private practice. Cold bathing, moreover, is not suitable for indiscriminate application and has been known to produce collapse. The internal administration of pyramidon yields equally good results with much less fatigue and discomfort to the patient and much less work for the attendants. The temperature becomes normal, the frequency of the pulse decreases, cerebral symptoms such as delirium disappear, and a great change for the better in the patient's condition is apparent in from 24 to 36 hours. The dose of pyramidon is 0·2 gramme (three grains) in mild cases and 0·3 or 0·4 gramme in severe ones. These doses should be given regularly every two hours day and night until the temperature becomes normal. In mild cases the cerebral symptoms usually disappear very soon and the patient's mind becomes quite clear after 24 hours' treatment; in severe cases attended with unconsciousness the improvement in the cerebral symptoms does not show itself until after the lapse of about 48 hours, when the patients become able to answer questions and to drink without assistance; the effect on the pulse was, of course, less marked than in the mild cases. The temperature became normal in every instance after a sufficiency of the remedy had been given. The treatment ought not to be commenced until the diagnosis is certain and must then be continued for three or four weeks; after this it may be stopped and the effect carefully watched so that it may be resumed if there is any recurrence of pyrexia. Dr. Valentini treated 19 cases by this method with two deaths, one of which was due to pyæmia and the other to cardiac debility. No ill-effects or undesirable sequelæ were observed. Pyramidon does not seem to have a specific influence on typhoid fever. Its action is palliative and it does not shorten the course of the disease.

April 20th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Dissensions in the United States Red Cross Society.

As a result of public criticisms of Miss Clara Barton's management of the United States Red Cross Society the official organisation has suspended from active membership the more prominent of the malcontents. These include General John M. Wilson, U.S.A., retired, who last year was vice-president of the society; ex-Secretary of State John W. Foster; ex-Secretary of the Navy Hilary A. Herbert; Rear-Admirals Van Reypen and Ramsay, U.S.A., retired; and Mrs. Anna Roosevelt Cowles, sister of President Roosevelt. All the above-mentioned are Washington members of the Red Cross who presented a memorial to Congress protesting against the present methods of managing the Red Cross Society. The signers of the memorial asserted that the affairs of the society by recently adopted by-laws were placed wholly in the hands of its President, Miss Clara Barton, and the object of the memorial was to endeavour to bring about a reorganisation of the society through the retirement of Miss Barton from the active presidency to the honorary presidency on an annuity.

Political Control of New York State Charitable Institutions.

The Governor of New York State has caused to be passed laws which will oust the Charity Organisation from any control or supervision over the various State institutions. The new method of management is termed a centralisation scheme, under which the expenditure of about $2,500,000 (£500,000) annually granted for supplies to State hospitals, charitable and reformatory institutions, and prisons will be in the hands of politicians. The medical journals of the State have been unanimous in condemning the scheme.

Hydrophobia in Chicago.

There has been a considerable amount of hydrophobia in some American cities of late. New York city has had several cases and there have been more in Chicago. Dr. Arthur Dean Bevan recently read a paper before the members of the Chicago Hospital Society entitled "Hydrophobia Prevalent in Chicago: Measures for Prevention." In the course of his address Dr. Bevan said that the report of the local Pasteur Institute showed a total of 1838 persons treated in the past 12 years. Of these, only seven died, an admittedly brilliant result. He, however, was somewhat sceptical as to the good effects of the treatment, owing to the difficulty of establishing the fact that the animal producing the bite was mad and because of the impossibility of determining the actual proportion of cases developing from the bites of infected animals. Nevertheless, he was convinced that the Chicago dog-muzzling law was inadequate. The speaker went on to say that there have been 91 known deaths from rabies in Chicago since 1891, although he was not satisfied that these figures represented the full mortality from that cause. He designated the city dog-law as stupidly inefficient, inasmuch as it was inactive between Nov. 1st and April 1st, and quoted statistics demonstrating the fallacy of the belief that dogs do not go mad in winter.

New York City Hospital Saturday and Sunday Fund.

The Hospital Saturday and Sunday Fund of New York city amounted this year to $68,000 (£13,600) which the distributing committee has divided among 37 hospitals in sums varying from $6800 (£1360) to $250 (£50).

April 15th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Milk Supervision in Victoria.

THE Board of Public Health in Victoria has for some time been considering, and has now drafted, a Bill for the supervision of the milk-supply. The chairman, Dr. D. A. Gresswell, has outlined the main provisions of the Bill which contains at least three or four requirements which have not hitherto been matters of legislation. Power is given to make regulations concerning a large variety of subjects, dealing with the milker, with the cow to be milked, and with a variety of details relating to the dairy farm. Dairymen themselves are to furnish the municipal councils at regular intervals with certificates from duly qualified veterinary surgeons as to the condition of their cattle—an innovation which will reduce vastly the quantity of work required from the councils' veterinary experts. The Bill also gives power to councils and to the Board of Health absolutely to forbid the use of cows for milking purposes for human consumption whenever, in the opinion of a council or of the board, such cows are likely to yield unwholesome milk. The board or the council is the final arbiter in deciding whether or not the milk of a cow is wholesome. The Bill also gives the councils power to forbid the use of cows for furnishing milk for human consumption in cases where an outbreak of disease has been traced to their satisfaction to a particular cow or cows. A comprehensive clause prohibits the selling, under the name of "milk" or "entire milk" or other name indicative of unchanged milk, of any article of diet which is not absolutely the unchanged product of the udder of the cow. There is, however, a modifying clause allowing the addition of ingredients by order in council, on the recommendation of the Board of Health. If the board said that a certain chemical substance might be added as not being unwholesome, then there would be power, under the Act, to have it gazetted by an order in council, and such addition would then be legal.

Hospital Affairs.

The annual meeting of the Sydney Hospital was held on Feb. 3rd, the Governor of New South Wales presiding. The annual report stated that the past year had been one of marked activity and that the hospital was in a condition of efficiency it had never before attained. The financial position had been well maintained and the subscriptions showed a substantial increase. The following statistics were submitted: Patients remaining in hospital on Dec. 31st, 1901, 304; patients admitted during 1902, 4201; total under treatment, 4505; discharged cured, 2628; relieved, 933; unrelieved, 167; died, 453; remaining in hospital on Dec. 31st, 1902, 315; percentage of mortality on cases treated, 10; average number of admissions per week, 80; largest number admitted in one week, 103; smallest number admitted in one week, 63; average number of beds occupied, 298; largest number of beds occupied, 324; smallest number of patients, 255 (during repairs to the Moorcliff branch); average duration of stay in days, 27; number of accidents and urgent cases admitted without recommendations, 1670; number of patients admitted on Government orders, 1915; number of patients admitted on subscribers' orders, 87; number of patients admitted who contributed to their maintenance, 529. Of the 453 deaths 128 patients died within 24 hours of admission. The number of operations performed during the year was: At the main hospital, 2361; at the Moorcliff branch, 447: dental operations requiring anæsthetics, 146; total, 2954 The statistics of the out-patients' department are: medical department, 7641 new cases, 31,202 attendances; surgical department, 3914 new cases, 13,569 attendances: eye department, 1636 new cases, 7907 attendances; ear, nose, and throat department, 1516 new cases, 7438 attendances; skin department, 711 new cases, 4019 attenda[illegible] 979 new cases, 5444 attenda[illegible]w cases, 314 attendances. [illegible] Total: 16,711 new cases, 69,893 attendances. Casualty department, 10,176 new cases, 20,127 attendances. The balance sheet showed that compared with the previous year the expenditure had been increased by £1040, and compared with 1900 by £2656. Subscriptions, compared with 1900, had increased by £936, and exceeded those for 1901 by £852, exclusive of £150 received from the *Children's* Industrial Exhibition. The additional contributions were attributed to special coronation donations. It [illegible] expense, owing to the dr[illegible] amount to nearly £2000. [illegible] during the past year and the carrying out of many repairs, however, a reasonable surplus would be carried forward. The maintenance per bed for the year had been £67 against £63 7*s*. 7*d*. for 1901. For the current 12 months the cost is estimated at £71 2*s*.—Dr. C. V. Bowker has resigned the position of medical superintendent of the Sydney Hospital. Dr. Maitland has been appointed surgeon, and Dr. H. S. Stacey assistant surgeon.—The annual meeting of the Balmain Hospital was held on Jan. 28th. The report showed that a great deal of work had been satisfactorily done and that there was a credit balance of £467. Mr. C. U. Carruthers moved that it was advisable that a resident medical officer should be appointed. He said that the growth of the hospital had been rapid and that it was impossible for a medical man who had private practice outside the hospital to give fair and prompt attention. The committee paid a non-resident medical officer £150 a year. A resident officer could be obtained for £120 a year and board and lodging. Mr. T. M. Harding seconded the motion. Dr. L. G. Davidson, the late paid medical officer (who recently resigned), said they could not get a competent resident medical officer at £120 a year and he was willing to continue in his position till his successor could be appointed. The motion was lost by a large majority.—A conference was held in Melbourne on Feb. 4th of representatives of the various hospitals in Victoria to consider the advisability of securing an amendment of the Hospitals Act. The conference was the outcome of a discussion of the by-laws of the Women's Hospital with regard to the election of the medical staff by the subscribers. Certain suggested amendments could not be carried out without an alteration of the Hospitals Act. It was argued that at present it is inadvisable to do anything in the direction of inducing the Government to amend the Charities Act, and the following amendment was carried:—

[illegible]

The committee of the Women's Hospital, Melbourne, is considering a proposal to provide accommodation for the reception of cases of puerperal septicæmia at an estimated cost of £400. Up to the present such cases have been rigorously excluded. The question was referred to the building committee as the estimate was considered too low.

March 10th.

Obituary.

FRANCESCO COLZI.

UNDER date, Florence, Palm Sunday, one of our Italian correspondents writes: Tuscany nay rather Italy—indeed, the healing art "ubique gentium"—are to-day lamenting the loss of one of the most brilliant and successful surgeons of his time. Francesco Colzi, after a heroic struggle of ten days' duration, succumbed on April 4th to the terrible gunshot wound received in circumstances already made known to the readers of THE LANCET.

For some 72 hours the skilful medication of the fractured arm and lacerated axilla seemed to justify the abstention from amputation—the course approved by the eminent consultant, Professor Bassini of Padua. Bulletins were issued night and morning to meet the solicitude of the sympathising public, from the King and Court of the Quirinal downwards, and the tenour of these, while not sanguine, could not be called discouraging. But by March 30th, when gangrenous points began to declare themselves, the thought of saving the arm had to give way to that of saving life itself, and after a long consultation, held before Professor Bassini could arrive from Padua, it was decided to perform the amputation which Professor Colzi had counselled from the first. At the professor's own request the operator was his old and favourite pupil and clinical assistant. [illegible] great skill to remove the arm [illegible] The operation, which w[illegible] the patient maintaining an impassive yet vigilant calm, was an admirable specimen of the surgeon's art and the subsequent medication, in which Dr. Stori was assisted by his colleagues Professor Burci and Professor Del Greco, seemed to give fresh assurance that the precious life might be preserved. The prognosis was further reinforced by the indomitable pluck, not to say vivacity, of the patient himself who, contemplating his lost arm, said: "E dopo? Che farò per occupare il tempo? Anderò a studiare chimica nel gabinetto del Professore Piccini." ("And after? What shall I do to employ the time? I'll go and study chemistry in Professor Piccini's laboratory.") But *Dis aliter visum.*

Just before the operation some liquid that had oozed from the wound had been analysed and the bacilli of tetanus were detected, although the patient manifested no tetanic symptoms. The appropriate serum was at once obtained from Milan and with Professor Colzi's consent was injected in very high doses. But the characteristic spasms did not fail to present themselves—even though the serum, still in the highest doses, was injected in the immediate neighbourhood of the wound. How had these bacilli been introduced? At the consultation it was left undetermined whether they had found their way in with the gunpowder, or the dust of the highway, or the shreds of clothing. Meanwhile the convulsive contractions, of the countenance first and then of other parts of the body, increased in intensity and frequency, the patient still maintaining perfect lucidity of mind and even discussing the phenomena as if he were lecturing in the pathological theatre. By this time the public anxiety, fed by the bulletins, had become as painful as it was universal, and among the innumerable callers at the hospital was His Royal Highness the Count of Turin, representing the solicitude of the Royal Family and Court. On April 3rd the tetanic convulsions involved the spina dorsalis and the lower extremities and at last the patient besought his colleagues to minimise his sufferings as far as they could. All hope of saving life was gone and after making sundry dispositions in presence of his immediate relatives (Professor Colzi was unmarried) he received the consolations of the Church from the Capuchin Padre Paolo attached *ad hoc* to the hospital. By 2 A.M. of April 4th he became delirious—the clinical staff assembled round his bed (Professor Grocco, Professor Banti, Professor Lustig, Professor Del Greco, Dr. Stori, Dr. Marchetti, Dr. Lenzi, and Dr. Berchielli) praying inwardly for the speedy advent of death as a relief to such agony. This did not come until 3 P.M., when a violent convulsive attack involved the heart and Francesco Colzi was no more.

The whole press, professional and lay, throughout Italy is unanimous in deploring his death in obituary notices more or less extended. From these I gather that he was born of a good family at Monsummano in Tuscany in 1855; that he was slow of development, having reached the age of nine years before he could read or write; that he made abnormally rapid progress at the University of Pisa and again at the Istituto di Studi Superiori at Florence; and that he graduated with great distinction in 1877 and thereafter made a tour of the principal cliniques of Europe as a post-graduate course. In 1879 he became assistant in surgery at the Hospital of the Santa Maria Nuova, and from 1883 to 1886 filled the post of assistant dissector in the Cabinet of Pathological Anatomy. In the latter year the illustrious Dr. Corradi, professor of surgery in the Florentine School, made him his assistant, a post which he held till 1892, after which he was elected extraordinary professor of clinical surgery in the University of Modena. Before the year was out he returned to Florence and finally succeeded Professor Corradi himself, first in 1897 as extraordinary and then in 1902 as ordinary professor of clinical surgery. Some notion of his activity and success in his chosen branch of the profession may be gathered from his "Contributo di Clinica Operativa," published 12 years ago, in which he tabulates and describes 843 operations performed by himself between 1886 and 1891. Of these 801 were successful; six were relieved or in course of cure when the volume was published; four were, on its publication, in the same condition or showing symptoms of relapse, necessitating supplementary interference; and of the 32 persons who died the majority succumbed to ailments other than those which had required his intervention. Extirpation of the larynx was one of his most brilliant successes, but the radical cure of hernia on the lines of Bassini's method brought him most into notice. There were 20 sufferers from this malady, in conditions more or less urgent, awaiting him on the day after the casualty that laid him low. For his contributions to the literature of this subject the reader may be referred to the professional journals of Italy; the leading Tuscan newspaper, the *Nazione* of Florence, fills half a column of its space in enumerating their titles alone.

WILLIAM BERRY KELLOCK, M.D. ST. AND., F.R.C.S. ENG., L.S.A.

By the death of Dr. W. B. Kellock at the ripe age of 82 years the north of London has lost one of its oldest and most respected practitioners. Coming from a family which included many generations of medical men he was apprenticed to his father in his native town of Totnes, Devonshire, received his medical education at Guy's Hospital, became a Member of the Royal College of Surgeons of England in 1843, a Licentiate of the Society of Apothecaries, and doctor of medicine (St. Andrews) in the following year, and in 1878 was elected a Fellow of the Royal College of Surgeons of England. Dr. Kellock was for a time resident medical officer at the Stamford-hill and Stoke Newington Dispensary, in which institution he always took a lively interest and with which he was connected as surgeon and consulting surgeon throughout the remainder of his life. He was one of the oldest Fellows of the Medical Society of London and a Fellow of the Linnæan and Royal Horticultural Societies. Throughout an active practice extending over nearly 50 years his wide knowledge of his profession, his handsome, commanding presence, and his extreme kindliness of manner made him trusted and respected by several generations of patients; jealous to a degree of the integrity of his profession and its traditions he possessed an absolutely unbiased mind, always appreciative of real advances in modern medicine and surgery. Although advancing years made him relinquish active practice some 12 years ago his advice and help continued frequently to be sought by former patients and they are not a few who will grieve at the passing away of one of the wisest and kindest of friends and one of the most upright of men. Dr. Kellock left no family and his body was buried at Totnes with that of his wife who died in 1901.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the second examination of the Board at the April quarterly meeting of the examiners in Anatomy and Physiology:—

Leonard Ernest Acomb, Middlesex Hospital; Arthur Lionel Baly, B.A. Camb., Cambridge University and Middlesex Hospital; Frank Cyril Harvie Bennett, St. Mary's Hospital; Parvatiprasad Vishvanath Bhatt, St. Bartholomew's Hospital; William Thomas Briscoe, B.A. Camb., Cambridge University; Cuthbert Garrard Browne, Westminster Hospital; Frederick Henry Montagu Chapman, St. George's Hospital; William Winsland Douglas Chilcott, Charing Cross Hospital; Emil Christofferson, University College, Bristol; John Clarke, University College, Sheffield; George Cockcroft, Guy's Hospital; Herbert Alfred de Pinna, Toronto University and Middlesex Hospital; Gurth Eager, King's College, London; Kenneth Edward Eckenstein, University College, Liverpool; Thomas Llewellyn Evans, University College, Cardiff; Arthur Roland Fisher, Yorkshire College, Leeds, and King's College, London; Claude Francis Fothergill, B.A. Camb., Cambridge University and Guy's Hospital; Howard Græme Gibson, Guy's Hospital; Robert Gray Gillies, Middlesex Hospital; Carleton Wyndham Gittens, University College, London; Morris Grundy, Cambridge University and King's College, London; Horace Gooch and Eric Henry Rhys Harries, London Hospital; Thomas Reginald Harvey, Guy's Hospital; Robert Francis Hebbert, St. Thomas's Hospital; Montague Leonard Hine, Middlesex Hospital; George Montague William Hodges, University College, London; Frederick William Hobbs and Walter Leopold Holyoak, St. Mary's Hospital; Cyril Bertram Hutchison, London Hospital; Thomas Jones Jenkins, University College, Cardiff; Valentine Goode Johnson, St. Mary's Hospital; Harold Emlyn Jones, London Hospital; Henry John Sulling Kimbell, St. Bartholomew's Hospital; Henry Andrew Lash, St. Mary's Hospital; Thomas Bramley Layton, Guy's Hospital; Robert Lecky, University College, Bristol; David Thomas Lewis, University College, Cardiff, and Middlesex Hospital; Herbert Bowen Maxwell, London Hospital; Patrick Francis McEvedy, John Harry Mayston, and Gerald Hamilton Morris, Guy's Hospital; Albert Clifford Morson, Middlesex Hospital; Hubert Cowell Mulkern, St Mary's Hospital; Charles Max Page, St. Thomas's Hospital; Hubert Arnold Pallant, Guy's Hospital; Jeffery Wimperis Parker and Alan Randle, University College, London; Frederic Eustace Leigh Phillips and Arthur Haig Pollard, London Hospital; Edward Ebenezer Rendle, Guy's Hospital; Cecil Frank Rumsey, Charing Cross Hospital; William Octavius Sankey, St. Thomas's Hospital; Frederick Smith, University College, Sheffield; Leslie Ernest Maule Smith, Charing Cross Hospital; Reginald Thane Taylor, London Hospital; Edmund James Fairfield Thomas, University College, Bristol; Charles Henry Burton Thompson, Middlesex Hospital; George Gilbert Timpson and Horace Ernest Humphrey Tracey, Guy's Hospital; William Fentham Todd, Lon [illegible] Frederick Boileau Treves, B.A. Camb., Cambridge [illegible] r Walker, Yorkshire College, Leeds; Cu [illegible] University College, London; John Charles [illegible] Hospital; and Arthur Zorab, Guy's Hospital.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the subjects indicated:—

Surgery.—T. W. S. Hills (Section I.), Cambridge and St. Mary's Hospital; D. J. Lewis (Sections I. and II.), London Hospital; W. S. Lewis (Section I.), Birmingham; E. H. Noney, (Section II.), Calcutta and Westminster Hospital; J. A. Renshaw (Section I.), Manchester; and C. C. Rushton (Sections I. and II.), University College Hospital.

Medicine.—H. J. Aldous (Sections I. and II.), King's College Hospital; F. G. H. Cooke (Section II.), University College Hospital;

J. W. [illegible]

[illegible] (Sections I. and II.), London Hospital.

Forensic Medicine.—J. F. Ellis, St. George's H[illegible]

[illegible] Hospital; J. A. Renshaw, Manchester; and J. P. B. Snell, Middlesex Hospital.

[illegible] dates, C. O. [illegible]oney,

UNIVERSITY OF DURHAM.—At the examination for the degree of Bachelor in Medicine, held in April, the following candidates satisfied the examiners:—

FIRST EXAMINATION.

1. [illegible]

2. [illegible]

3. [illegible]

4. [illegible] Newcastle-upon-Tyne.

[illegible]

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the April sittings of the Scottish Conjoint Medical Board held in Glasgow the following candidates passed the respective examinations:—

F[illegible]*urse*).—Laura Gertrude Powell, [illegible] Ernest Barrett, Leeds; Jeremiah [illegible] Hume Patterson, Langside; John Arthur Smith, Glasgow; Thomas Forrest M. Leishman, [illegible]

[illegible] Ashurst, Govan (with [illegible] Percival Henderson, [illegible] (with distinction); [illegible]deric James Breakell, [illegible]

S[illegible] [illegible]hn Stothart Farries, Leeds [illegible]

[illegible] Kennedy Joseph O'Brien, Galway.

UNIVERSITY OF GLASGOW.—The following have passed the first professional examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (B., Botany; Z., Zoology; P., Physics; and C., Chemistry):—

John Andrew Aitken (C.), James Montgomery Anderson (P.), John Anderson, M.A. (B., Z.), Thomas M'Call Anderson (Z.), Andrew Hamilton Arnott (C.), David Arthur (B., Z.*), John Atkinson (Z.), Edgar Barnes (Z.*), Herbert Bertram (Z.,* C.), John Henry Bisset (B., Z., P. [illegible] M.A. (Z., C.), Murdo Buchanan [illegible] James Cairns (Z.,* C.), Thomas H[illegible]ew Ignatius Thornton Cassidy (Z[illegible] (B.), Alexander Beck Cluckie (P.), Alexander Johnston Couper (B., P.), James Robert Craig (Z.), [illegible] Dick (B.), John [illegible] (B.), James Richa[illegible] Donald Duncan ([illegible] Bowman [illegible]ck, M.A. [illegible]), James M'Ilroy [illegible] David John Williams (B.), Frank Ritchie Wilson (Z.,* C.), Hugh Mundle Wilson (Z.), William Mitchell Turner Wilson (B., P.), Garabed Yeghis Yardumian (Z., C.), and Matthew Young (Z.,* C.).

Women.—Annie M'Crorie (P., C.), Janet Annie Macvea (C.), and Jane Isabel Robertson (P., C.).

The following have passed the second professional examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (A., Anatomy; P., *Physiology*; and M., Materia Medica and Therapeutics):—

Scott Campbell Adam (M.), George Allison Allan (A., P.*), William Allison (A., P., M.), Andrew Henderson Baird, B.A. (A., P.), [illegible]er (A.), George Duncan Morrison [illegible]), Thomas Murdoch Campbell, [illegible] Chislett (A.), Thomas Goodall Copestake (P.), Weir Burns Cunningham (M.), Robert Wilson Dale, M.A. (A.,* P., M.), Robert Scott Dewar, M.A. (A., P., M.), Allan Campbell Douglas (A., P.), Walter Duffy, M.A. (A., P., M.), John Shaw Dunn, M.A. (A.,* P.*), Eric John Dyke (A., P.), Hamilton William Dyke (A., P.), James Fairley (A., P., M.), Harry Prescot Fairlie (A., P., M.), Alexander Burns Ferguson (A., P., M.), Edward John Fitzgerald (M.), William Gilchrist (P., M.), Joseph Glaister (M.), Alexander *Graham*, B.Sc. (A., P.), William Grier (A., P.), Frank Hauxwell (A.), James Waugh Hay (A., M.), Robert M'Cowan Hill (P., M.), [illegible]ald, M.A. [illegible] Macintyre [illegible]cleod (P.), [illegible] Drummond [illegible] (A.), Peter Maguire (A., P., M.), James Marshall (A.), William Blair Morton Martin (M.*), Robert May (P.), Henry Joseph Milligan (A., P., M.), David Robertson Mitchell (A., P., M.), William Struthers Moore (A., P., M.), Gavin Denholme Muir (A., M.), Frank Anderson Murray (M.), Patrick Joseph O'Hare (P., M.), Henry Sherwood Ranken (A., P.,* M.), Cunison Deans Rankin (A., P., M.), Thomas Thomson Rankin (A., P[illegible] M.), [illegible] Capp[illegible] Sans[illegible] Hern[illegible] Alex[illegible]

[illegible] Annie Thomson Clark, [illegible]abeth Maud M'Vail, [illegible] Jessie Deane Rankin.

M.A. (A., P., M.), Mary Spence (A., P., M.), and Annie May Yates (A.).

The following have passed the third professional examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B) in the subjects indicated (P., Pathology; and M., Medical Jurisprudence and Public Health):—

Archibald Craig Amy (P., M.), Henry Graeme Anderson (P.), James Richard Sunner Anderson (M.), John William Arthur (M.), David Blackley (P., M.), Forrest Brechin (P., M.), Charles Brown (P., M.), George Yuille Caldwell (P., M.), Peter Carrick, M.A. (P., M.), Robert Buchanan Carslaw, M.A. (P.*), Robert Peploe Cartwright (P.), James Alexander Cowie, B.A., B.Sc. (P., M.), David William Davidson (M.), Thomas Thornton Macklin Dishington (P.), Hugh M'Millan Donaldson (M.), Charles Milligan Drew, M.A. (P., M.), Hugh Harvey Fulton (P.*), George Garry (P.), James Gemmell (M.), William Harold Gillatt (P., M.), William Macmillan Gilmour (P., M.), David Livingstone Graham (P., M.), John Graham (P., M.), George Munn Gray (P.*), Louis Leisler Greig (P., M.) John Cochrane Henderson (P., M.), Alexander Jamieson (P.), Robert Dallas Kennedy (P., M.), John Kerr (M.), William Henry Kirk (P., M.), Robert Thomson Leiper (P., M.), William Jamieson Logie (P., M.), Thomas Symington Macaulay (P., M.), John Duncan M'Callum, M.A. (P., M.); Donald Carmichael M'Cormick (P.), Neil M'Dougall (M.), James Boston M'Ewan (P., M.), Tom Duncan M'Ewan (P [illegible] M'Farlane (P.*), Robert Maxwell [illegible] M'Guire (P., M.), James M'Hou [illegible] Ronald Mackinnon (P.), David [illegible] (P., M.), Norman Alexander Macleod (M.), Andrew Brown M'Pherson (P., M.), Andrew Meek (P., M.), Peter Millar (P., M.), John Muir (P., M.), Macdonald Munro (P., M.), George Clement-Nielson (P., M.), Thomas Orr (P.), Howard Henderson Patrick (P.), John Clegg Pickup (P., M.), Alexander MacMillan Pollock (M.), Andrew Maclean Pollock (P.), James Porter (P.), William Murdoch Rae (M.), Donald Ronald Reid (P.,* M.), Daniel Stevenson Richmond (M.), Berkeley Hope Robertson, M.A., B.Sc. (P., M.), Robert Thin Craig Robertson (P., M.), George Goldie Smith, B.Sc. (P.), John Stewart (P., M.), [illegible] (P., M.), William Craig Stewart (P., M [illegible] (P., M.), William Templeton (P., M.), [illegible] (P.), William Young Turner, M.A. (P., M.), Hugh Fleming Warwick (P.), Robert Watson (P.), Archibald Crombie West (P., M.), Archibald Simpson Wilson (P., M.), David Watson Wilson (P.), George Wilson (M.), Robert M'Nair Wilson (P., M.), and Watson Young (P.)

Women.—Annie Agnes Baird, M.A. (P., M.); Annie M'Caig Black (P., M.), Roberta Campbell (P.), Ethel Lily Chapman (P.), Jane Hamilton M'Ilroy M.A., B.Sc. (P., M.); Jane Stark M'Lauchlan (P., M.), Charlotte Reid Park (P.), Jane Reid Shaw (M.), Lily Smellie (P., M.), and Elizabeth Taylor Talbert (P., M.).

* Passed with distinction in the subjects indicated.

Mr. Ernest Milton Watkins has passed the third professional examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.) in the subjects of (*a*) Regional Anatomy and (*b*) Materia Medica and Pharmacy.

A COLLECTION OF DRUGS.—Mr. E. Merck, manufacturing and pharmacological chemist, has at the present moment on view at his office, 16, Jewry-street, London, E.C., a collection of drugs which has been prepared and put up in a form intended to meet the requirements of medical schools. The collection has been constructed to show the typical characteristics of each specimen, while the specimens are exhibited in such a way that they can be examined without much handling. It is, however, confined to the organic parts of the materia medica and comprises only the plants themselves and not any preparations thereof. Cinchona bark, for example, is exhibited, but there is no specimen of sulphate of quinine. The limitation of the scope of the collection prevents it from being thoroughly useful to medical students who require to obtain familiarity with the appearance not only of the organic parts of the materia medica but of the derivatives of those parts and also of the inorganic parts. The collection contains many specimens of plants which are not in the British Pharmacopœia and it is unnecessary for the student to know the appearance of these. The more the medical man in later life knows the better, but all teachers are agreed that the present curriculum of the medical student is sufficiently severe and that to teach him more than is likely to be demanded by the examiners is to run the risk of muddling him. The collection is not exhaustive as far as the organic substances are concerned. There are, for example, no specimens of ergot, camphor, colchicum, or cod-liver oil, not to attempt to exhaust the omissions which we noticed. In spite of this criticism we consider Mr. Merck's collection to be thoroughly worth attention, for the idea is a good one and to make the collection complete should not be very difficult.

DIFFICULTIES UNDER THE INFECTIOUS DISEASES NOTIFICATION ACT.—At the meeting of the Cornwall county sanitary committee held at Truro on April 16th the clerk reported that correspondence had taken place between the committee, a medical officer of health, and a general practitioner in reference to the notification of certain alleged cases of diphtheria. A communication had been received from the Local Government Board on the subject which stated that, in the opinion of the Board, the certifier's statement of the nature of a notified case of infectious disease should be accepted unless there was reason to believe that he was not acting in good faith. The Board added that it did not consider it ordinarily the duty of a medical officer of health to examine personally patients who had been notified as suffering from infectious disease with a view to check the accuracy of certificates and where circumstances might render such an examination desirable it should be made after communication with the medical practitioner in attendance and if possible with his coöperation. With regard to the reliance to be placed on bacteriological examination of patients suspected to be suffering from diphtheria the Board remarks that it is advised that a single negative result cannot be regarded as decisive. One examination of a swab from the throat in a given case of diphtheria will not invariably yield evidence of the presence of the diphtheria bacillus in the material, and a careful clinical diagnosis cannot with safety be disregarded in cases which do not on a single test furnish sufficient evidence to warrant their being classed bacteriologically as diphtheria. The Board added that it regarded it as highly improper that an inspector of nuisances should, in any circumstances, collect throat swabs from suspected cases of diphtheria. Eventually the committee decided not to deal with the matter in view of the fact that it had been considered by the Local Government Board.

BOOKS, ETC., RECEIVED.

CHURCHILL, J. AND A., 7, Great Marlborough-street, W.

Ocular Therapeutics According to the Most Recent Discoveries By Dr. A. Darier. Translated by Sydney Stephenson, M.B., C.M., Honorary Secretary of the Ophthalmological Society of the United Kingdom. Price 10*s.* 6*d.* net.

DORNAN, WILLIAM J., Philadelphia.

Essays on Clinical Medicine, being Reprints of Papers Published at Various Times in the *American Journal of the Medical Sciences.* By Beverley Robinson, A.M., M.D. Paris, Clinical Professor of Medicine at University and Bellevue Hospital Medical College. Price not stated.

FISCHER, GUSTAV, Jena.

Klinisches Jahrbuch. Zehnter Band. Drittes und viertes Heft. Dr. Springfeld, Die Typhusepidem[illegible] Arnsberg und ihre Beziehungen zu [illegible] Wasserversorgungsanlagen. Price to [illegible] subscribers M 7.50.

FRAMPTON, E. J., Bournemouth. (For the Association of Medical Men receiving Resident Patients.)

Where Shall I Send My Patient? A Guide for Medical Practitioners, and Book of Reference to the Health Resorts and Institutions for Patients of Great Britain. Price not stated.

KIMPTON, HENRY, 13, Furnival-street, Holborn, E.C.

Diseases of the Skin. A Manual for Students and Practitioners. By Joseph Grindon, Ph.B., M.D., Professor of Clinical Dermatology and Syphilis, Washington University. Series edited by B. B. Gallaudet, M.D., of Columbia University, New York. Price 7*s.* 6*d.* net.

KING, P. S., AND SON, Orchard House, Westminster, S.W.

Report of the Proceedings of the Thirty-first Annual Poor Law Conference held in the Guildhall, London, on March 10th and 11th, 1903. President, Hon. Sydney Holland. Price 1*s.* net.

LONGMANS, GREEN, AND Co., 39, Paternoster-row, E.C.

The Annual Charities Register and Digest. 1903. With an introduction by C. S. Loch, Secretary to the Council of the Charity Organisation Society, London. Price 5*s.* net.

REBMAN, LIMITED, 129, Shaftesbury-avenue, W.C.

Portfolio of Dermochromes. By Professor Jacobi of Freiburg im Breisgau. English adaptation of text by J. J. Pringle, M.B., F.R.C.P., Physician to the Department for Diseases of the Skin at the Middlesex Hospital, London. 4 Parts. Parts I. and II.

SMITH, ELDER, AND Co., 15, Waterloo-place, S.W.

Dictionary of National Biography. Index and Epitome. Edited by Sidney Lee. Price 25*s.* net.

STECHERT, G. E., New York and London.

The Manual Treatment of Diseases of Women. By Gustaf Norström, M.D., of the Faculty of Stockholm. Price 10*s.*

Chronic Headache and its Treatment by Massage. By Gustaf Norström, M.D., of the Faculty of Stockholm. Price 4*s.* 6*d.*

STUBER, A. (C. KABITZSCH), Würzburg.

Die Physikalisch-diätetische Therapie in der ärztlichen Praxis. Von Dr. med. Bernhard Presch, Arzt in Hannover. Lieferung VI. Price M.2.

UNIVERSITY PRESS, Royal University of Ireland, Dublin.

The Royal University of Ireland Examination Papers, 1902. A Supplement to the University Calendar for the Year 1903. Price not stated.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ARMOUR, DONALD JOHN, B.A., M.B. Tor., M.R.C.P. Lond., F.R.C.S. Eng., has been appointed Assistant Surgeon to the West London Hospital.

BRA[illegible] has been appointed Resident [illegible]

BRO[illegible]

EVA[illegible] Hospital for Women.

JARDINE, ROBERT, M.D. Edin., M.R.C.S. Eng., F.F.P. & S. Glasg., F.R.S. Edin., has been appointed Professor of Midwifery in St. Mungo's College, Glasgow.

JOHNSON, JAMES, L.R.C.S. & P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for Bispham and Norbreck.

[illegible] been appointed Junior House [illegible] Dispensary.

[illegible] been appointed a Physician to [illegible] pany for Manchester, Bowdon, [illegible]

MAC[illegible] the [illegible]

MA[illegible] ed [illegible]

OR[illegible]

WARDALE, [illegible], M.B. Durh., has been appointed Lecturer on Ophthalmology in the University of Durham College of Medicine, Newcastle-on-Tyne.

WHIPHAM, T. R. C., M.B., B.Ch. Oxon., M.R.C.P. Lond., has been appointed Physician to Out-patients to the Evelina Hospital for Sick Children.

WHITE, J. B., M.D., M.S. R.U.I., has been appointed Medical Officer of Homerton Workhouse.

WILSON, WILLIAM CHEYNE, M.D., C.M. Edin., has been appointed Physician to the Plymouth Public Dispensary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BARRA, PARISH OF.—Medical Officer and Public Vaccinator. Salary £119.

BIRMINGHAM WORKHOUSE INFIRMARY.—Assistant Resident Medical Officer. Salary £100 per annum, with apartments, rations, laundry, and attendance.

CANCER HOSPITAL, Fulham, S.W.—House Surgeon for six months, renewable. Salary £70 per annum, with board and residence.

CANTERBURY BOROUGH ASYLUM.—Assistant Medical Officer. Salary [illegible] residence.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Surgeon, unmarried, for six months. Salary £20, with board and residence.

HOSPITAL FOR WOMEN, Soho-square.—Clinical Assistantships.

J[illegible] **MEDICINE.**—Director of the Insti[illegible]

I[illegible] **INFIRMARY**, Beckett-street, [illegible] unmarried. Salary £130 per [illegible] washing, apartments, and attendance.

LEICESTER INFIRMARY.—Clinical Clerk. Honorarium £10 10s., with board, apartments and washing.

LEICESTER SMALL-POX HOSPITAL.—Temporary Resident Medical Officer.

LIVERPOOL (CITY OF) INFECTIOUS DISEASES HOSPITAL.—Assistant Resident Medical Officer, unmarried. Salary £120 per annum, with board, washing, and lodging.

LIVERPOOL ROYAL INFIRMARY.—Vacancies on the Resident Staff for six months. Board, residence, and washing provided.

[illegible] washing.

NORTHAMPTON GENERAL INFIRMARY.—House Surgeon, unmarried. Salary £125 per annum, with apartments, board, attendance, and washing.

ROY[illegible] unmarried [illegible] shing.

ST[illegible] E.C.—House [illegible] lodging, and washing.

ST. OLAVE'S UNION CHILDREN'S HOMES, Peckham-rye, S.E.—Medical Officer. Salary £125 per annum.

SHEFFIELD ROYAL HOSPITAL.—Junior Assistant House Surgeon, unmarried. Salary £50 per annum, with board, washing, and lodging.

SOCIETY OF[illegible]

STATE OF[illegible] cer, unmarried.

SUSSEX CO[illegible] Salary £60 per [illegible]

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—House Surgeon for six months. Honorarium of £25, with board [illegible]

WES[illegible] *d.—House Surgeon*, un[illegible] oms, board, &c.

WE[illegible] Medical Officer. Salary [illegible] s, board, washing, and [illegible]

YORK COUNTY HOSPITAL.—House Physician. Salary £100 per annum, with board, residence, and washing.

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary £110 a year, with board, lodging, and attendance.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Pomeroy, in the County of Tyrone, at Towcester, in the County of Northampton, and at Shotts, in the County of Lanark.

Births, Marriages, and Deaths.

BIRTHS.

CRAWFURD.—On April 11th, at Harley-street, W., the wife of Raymond H. P. Crawfurd, M.D., F.R.C.P. Lond., of a son.

FENWICK.—On April 17th, at Harley-street, the wife of W. Soltau Fenwick, M.D. Lond., of a son.

SQUARE.—On April 14th, at Portland-square, Plymouth, the wife of J. Elliott Square, F.R.C.S. Eng., of a daughter.

MARRIAGES.

BARHAM—LONG.—On April 14th, at Saint Nicholas Cole Abbey, Queen Victoria-street, E.C., Percy Cornelius Barham, M.R.C.S., L.R.C.P. Lond., to Elizabeth Sarah Maud, second daughter of Mr. J. W. Long.

BEALE—MORTIBOY.—On April 21st, at St. Leonard's, Streatham, by the Rev. W. B. Lindesay, LL.D., assisted by Rev. W. H. Tasker and Rev. J. C. Wilson, Hanway Richard Beale, M.B., M.R.C.S. Eng., of Leeds, to Blanche Mortiboy, eldest daughter of Mrs. Mortiboy-Allen.

CRAIG—BROCK.—On April 16th, at the parish church of St. Peter-Port, Guernsey, Maurice Craig, M.D. Cantab., to Edith de Saumarez, [illegible] of Kentish Brock.

[illegible] John's Church, Eastbourne, [illegible] ond, of Greystoke, Upper [illegible] of Mr. John Abbott.

FOWLER—DAVIDSON.—On April 16th, at St. Stephen's Church, South Dulwich, Simson Carstairs Fowler, M.B., C.M. Edin., to Lyndesay Brougham, daughter of the late Rev. Walter Davidson.

[illegible] the Rev. Charles Bostock, of North [illegible], Canon Daniel, vicar of the parish, Edward Protheroe Smith, M.R.C.S., L.R.C.P., of Redditch, Worcestershire, eldest surviving son of Heywood Smith, M.D., of Welbeck-street, to Eva Mary, eldest daughter of E. Ingram Bostock, M.R.C.S., of Horsham.

DEATHS.

CHEESHIRE.—On Sunday, March 29th, at Santa Margherita, Italy, Edwin Cheeshire, F.R.C.S., of Pinner, Middlesex, late Senior Surgeon, Birmingham and Midland Eye Hospital, aged 84.

SPOONER.—On April 17th, at Coupar House, Blandford, Dorset, Edward Monro Spooner, M.D., M.R.C.S., L.S.A., aged 62 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

TO MEDICAL FREEMASONS.

To the Editors of THE LANCET.

SIRS,—Will you allow me to thank most heartily all those who voted for the case of C. P. Hines at the recent election at the Royal Masonic Institution for Boys, by means of which his success was assured?

I am, Sirs, yours faithfully,

April 22nd, 1903. HEATON C. HOWARD.

To the Editors of THE LANCET.

SIRS,—I think it is only right after your kind insertion of my letter in THE LANCET of April 4th, p. 1004, to point out to your readers that at the election at the Royal Masonic Institution for Boys on April 17th both the medical candidates were successful, Samuel Basil Flood being second on the list with 5452 votes and Cyril Patrick Hines being tenth with 4720, and that at the election at the Royal Masonic Institution for Girls on the 18th M. I. Mackay was successful, being fourth on the list with 5611 votes. This result is extremely satisfactory and if, as I almost venture to think, my previous letter has played some part in securing votes for these candidates, I may perhaps be permitted to express my gratification. But although all these candidates were successful, the fact still remains that some system of organisation is needed by which medical votes, which are not required by their owners for candidates in whom they are personally interested, may be pooled and the success of medical candidates thus be ensured. I do venture to hope that this subject will not be lost sight of by the many medical and hospital lodges which, happily, now exist. The voting papers have been issued for the elections at the Royal Masonic Benevolent Institution, but a hasty glance down the list on my part failed to discover any medical candidates.

Thanking you again for the hospitality of your columns,

I am, Sirs, yours faithfully,

April 21st, 1903. LUKE.

THE MEDICAL PROFESSION AND FRIENDLY SOCIETIES.

To the Editors of THE LANCET.

SIRS,—Will you be good enough to express your opinion as to the relation of the medical profession to the National Deposit Friendly Society? Do you consider that the society would be included in the warning about clubs recently issued by the General Medical Council? As far as I can see medical men are required to attend and provide medicine for patients at less than half the usual rate charged to poor patients, and the only compensating advantage is that the payment is assured.

I am, Sirs, yours faithfully.

April 4th, 1903. WALTER COOPER, L.R.C.P. Lond., &c.

*** If our correspondent will forward to us the regulations of the society as to medical men in its employ we will endeavour to answer his question.—ED. L.

TUBERCULIN.

To the Editors of THE LANCET.

SIRS,—I am anxious to know where I may find the latest information as to the treatment of pulmonary tuberculosis by injections of tuberculin, and especially as to the results, disadvantages, and cost of such treatment.

I am, Sirs, yours faithfully,

April 20th, 1903. R. M.

*** The most recent and the most authoritative statements concerning the use of tuberculin in human tuberculosis are to be found in pp. 84–172 of vol. iii of the Transactions of the British Congress on Tuberculosis, published by William Clowes and Sons, Limited, 23, Cockspur-street, London, S.W. We understand that the cost of tuberculin is not less than 8*s.* per bottle and that the outlay necessary for the approved treatment of a case of tuberculosis of the lungs during, say, six months would amount to about £6 or £8.—ED. L.

THE NODON VALVE.

To the Editors of THE LANCET.

SIRS,—I should be much obliged if you would publish the address of the makers of the Nodon Valve described in THE LANCET of April 18th, p. 1108, so that I may get a price list.

I am, Sirs, yours faithfully,

April 18th, 1903. G. H. C.

*** The Nodon Valve can be obtained from Messrs. Isenthal, 85, Mortimer-street, London, W.—ED. L.

CHANCRE OF THE LIP.

AMONG a series of cases demonstrated at the Medical Graduates' College and recorded in the April number of the *Polyclinic* there was one of chancre of the lip. The patient, a youth, had on the right side of his lower lip a rounded sore of considerable size, hardly raised above the surface and having only a very moderate degree of induration at its base. The glands in the submaxillary triangle were much enlarged, forming a very conspicuous bubo. The method of infection could not be traced. Mr. Jonathan Hutchinson, jun., said that it was not at all uncommon for an incorrect diagnosis to be made in such cases, probably on account of the unusual situation and also because chancres of this region did not, as a rule, present typical induration. He mentioned that in the Museum of the Royal College of Surgeons of England there were several examples of extra-genital Hunterian chancres, the true nature of which had been for some time entirely overlooked. Chancre of the lip was obviously from its situation full of risk to those brought into association with the patient and precautions to prevent infection should be adopted. Mercurial treatment should be used and some simple dressing, such as mild mercurial ointment spread on lint, should be kept on the sore. The attention thereby drawn to the sore would assist in reducing the danger of the infection being communicated to other persons.

WANTED—AN ETIOLOGY.

To the Editors of THE LANCET.

SIRS,—I have seen several men who have had intolerable itching of the skin over the shins. They were all men of cleanly habits who bathed regularly and had no skin disease—specific or otherwise. This itching in every case started during cold weather and lasted usually all the winter. What is the cause of this itching? I find unguentum picis liquidæ gives relief if used night and morning. I have been surprised to find so many men troubled in this way.

I am, Sirs, yours faithfully,

April 20th, 1903. AINSWORTH.

POST-GRADUATE WORK IN PARIS.

Syria asks if anyone can direct him to available information regarding the medical teaching institutions in Paris. He desires to spend a few months in Paris this summer to improve his French and would like at the same time to see some surgery at the hospitals.

◆

Pcs.—The Diseases of Infancy and Childhood, by L. Emmett Holt, second edition, London, 1903 (Kimpton, 25*s.*). Lehrbuch der Kinderkrankheiten, by A. Baginsky, seventh edition, Leipsic, 1902 (S. Hirzel, 16·50 marks). These are the most recent works. Pediatrics, by Professor T. M. Rotch, 1896, Young J. Pentland, Edinburgh and London, and A Practical Treatise on Diseases of Children, second edition, 1889, by Dr. Eustace Smith, may also be consulted.

R. A. B.—British medical qualifications are not registrable either in Germany or Austria. Our correspondent could only practise as an unqualified practitioner unless he is prepared to attend the ordinary course of medical study in the countries mentioned.

Mr. J. Penny.—There is no reason to suppose that the medical man whose qualifications are set forth with such minuteness is responsible for the paragraphs in question or for the insertion of the photograph.

Curious.—A district medical officer by residing outside his district ceases *ipso facto* to be medical officer. It is obviously desirable that a district medical officer should be easily accessible.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.) London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat Golden-square (9.30 A.M.), Soho-square (2 P.M.).

WEDNESDAY (29th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M).

THURSDAY (3[illegible]).—St. [illegible]'s (1.30 P.M.), St. Thomas's (3.30 P.M.), [illegible] (3 P.M.), St. George's (1 P[illegible]), Middlesex (1.30 P.M.), S[illegible] North-West London (2 P[illegible]) [illegible]ral (Gynæcological, 2.3[illegible]) [illegible]don Throat, (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FR

(2 P.M.).

SATURDAY (2nd).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. *George's* (1 P.M.), St. *Mary's* (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TY OF GREAT BRITAIN (20,
8 P.M. Casual Communica-
of Small Plates —Mr. C. H.
Macrostoma. Paper:—Mr.

dos street, Cavendish square,
reatment of Rectal Cancer

TUESDAY (28th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Paper:—Dr. C. Wall:
the Diplococcus

SOCIETY (Royal
M. Election of
. Herschell (Pre-
h in its Earliest

W.).—8 30 P M.
Paper:—Mr. Crouch: Three Cases of Vagus Inhibition from Chloroform.

RÖNTGEN SOCIETY (20, Hanover-square, W.).—8 30 P.M. Exhibition Evening.

WEST LONDON MEDICO CHIRURGICAL SOCIETY (Society's Rooms,

W. H. Kelson, Dr. H. Tilley, Mr. A. Thorne, and others.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

POLYCLINIC
nd Clinique.
ulability and

POLYCLINIC
: Clinique.

WEDNESDAY (29th).—*MEDICAL GRADUATES'* COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. C. Ryall: Clinique. (Surgical) 5 15 P.M. Dr. R. Jones: Mental Unsoundness amount-

COLLEGE AND POLYCLINIC
Mr. Hutchinson: Clinique.
ckinson: The Tongue in
Disease.

FRIDAY (1st).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. E. Clarke: Clinique. (Eye.) 5.15 P.M. Dr. L. Sambon: Insects of Medical Interest.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1902, which was completed with the issue of Dec. 27th, and the Title-page to the Volume, were given in THE LANCET of Jan. 3rd.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1902 are now ready. Bound in cloth, gilt lettered, price 18*s*., carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s*., by post 2*s*. 3*d*.

To be obtained on application to the Manager, accompanied by remittance.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them! Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

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Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, MR. CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W.C.

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and Agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

METEOROLOGICAL READINGS.

(Taken daily at 8 30 a.m. by Steward's Instruments.)

THE LANCET Office, April 23rd, 1903.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Rainfall.	Solar Radia in Vacuo	Maximum Temp Shade.	Min. Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 a.m.
April 17	30 32	N.E.	...	90	48	33	35	38	Fine
" 18	30 38	N.E.	...	95	60	31	34	38	Fine
" 19	30 27	W.	...	83	66	37	40	42	Hazy
" 20	29·94	S.	...	82	55	37	40	42	Hazy
" 21	29 56	E.N.E	...	67	49	42	43	48	Hazy
" 22	29·47	E.	...	93	51	36	39	43	Fine
" 23	29·43	N.E.	...	89	49	35	39	42	Fine

During the week marked copies of the following newspapers have been received: *Northampton Herald, Chester Observer, Surrey Advertiser, Notts Guardian, Bristol Mercury, Dublin Express, Bradford Observer, Daily Graphic, Sanitary Record, Local Government Chronicle, Mining Journal, Hertfordshire Mercury, Blackburn Daily Telegraph, Devon Gazette, Truth, Worcester Daily Times, Yorkshire Post, Westminster Gazette, Evening Telegraph, Essex Daily News, Northern Whig, Belfast News Letter, Dublin Times, Engineer, Literary Digest, Scientific American, Morning Post, &c.*

difficulty that they present to us and the line of practice that ought to be adopted if only we could have before us the complete evidence. But we must first know how often the diagnosis is wrong—that the public, for one reason, may realise that mistakes are inevitable; we must know, too, the risk to life, and those of discomfort, which such a mistake may entail, for there *are* considerable risks as regards the continuance of pain and instability of bowel at any rate; we ought also to know (if it be possible, but I fear it is not) the respective risks from large comparable series of cases treated by operation and without it.

In the matter of risks, too, and of prognosis after operations it is a question whether we always consider the patient enough. Think how dear life is to *you* and put yourself into his shoes. Take such a case as this that occurred to me not so very long ago: a young man with a young wife and family, with a disease that must eventually be fatal, and yet is removeable now at great risk but with some hope of cure. Surgery with its enthusiasm—progressive surgery is always young—says that it ought to be removed and that now is the only time. The real risks are minimised or forgotten and the patient is half urged through his relatives to undergo the chance. The onlooker sees chiefly the *risk* and thinks that it would be better for the sufferer to live his few months certain with those who are near and dear to him than to accept what is too often the remotest chance—and I am inclined to think that it *is* too often the remotest chance, for memory sleeps, in such cases, in a measure, and the disease is considered and the patient is forgotten. The class of cases that I have especially in mind are removals of portions of the intestinal tract for tumours, mostly, of course, of malignant nature. I suspect that in these if we knew the actual facts that the deaths are more than the successes, but the successes all come to the fore and are very striking, the bad results do not appear. And in thus being put out of sight forgotten, or slept over, although it may be conducive to the success of the surgery of the future, I doubt if the individual of the present is treated quite fairly. In this question is involved the frequent complaint of the operator in fatal cases that he had no chance—he was not called in time. But we must not forget that *in time* nevertheless often means for the *individual* that he dies a few weeks or months earlier than he would have done if he had been left alone. It may almost be said, I think, that the physician regards life from a different standpoint to the surgeon. Surgery must be ever pressing toward the mark for the prize of its high calling—the cure of disease and discomfort by operation—and unless its memory of failure or of very partial success were to sleep its onward progress towards its goal might be almost inappreciable. I remember years ago a boy being shown to me as a success in whom an endeavour had been made to obliterate the cavity of a long discharging empyema. But the chief result that was evident to my vision was that whereas there was before, perhaps, one large sinus, now there were six or seven little ones. I cannot think that I could ever have found myself in the position of claiming such a result as a success, but to the surgeon the few sinuses were but as fleabites compared with the advantage of the falling in of the chest which had been produced by the operation.

But I do not forget that medicine makes its mistakes also The mistakes of surgery are more obtrusive; those of medicine are less easy to be sure of and to detect. But I do not doubt that the case of "I and my four daughters who died of drinking Cheltenham waters" may be admitted as typifying the not infrequent mistakes of medicine. That many of them are no less difficult to be sure of is sufficiently and lamentably illustrated by the recent case in the criminal courts where a man poisoned three persons by antimony and even the third time was not so very far off escaping detection. Think, too, of the arsenical beer poisoning, in which instance, unless the cases had occurred in numbers, it may be doubted if we should have discovered them as such. They would all have gone down as cases of alcoholic paralysis, which has been so ticketed for years, and now it may even be possible that there is no such disease.

And this brings me to another class of cases of poisoning where memory may be said to sleep, for I suppose that more persons when they are ill are killed by kindness and anxiety on their behalf even than by drugs. A man no sooner becomes dreadfully ill than all the efforts of relatives and medical attendant are devoted to keeping him up Strong liquid food is poured in, alcohol is poured in, and the ship is gradually but surely sunk There must be many and many a valuable life thus put out of existence, loaded up with meat extracts and alcohol, till the blood which is the life will support the body no longer. You have any one of you often seen, if you wake your memory, the big man or woman very ill with bronchitis or heart disease thus loaded up with food and brandy, and where, if they had only been resolutely starved on water only, they might have had a fair chance of a longer life. But, alas, so deeply ingrained is this tendency to stuff the sick man lest he should sink that I defy anyone to fight effectually against that mighty trio, the patient, the relative, and your own forgetfulness of the belief, nay knowledge, that is in you. I have often used the illustration before—and I will do so again because it represents one of the most important facts in the treatment of disease—of the pig that became imprisoned in the Dover cliff with absolutely no food save a moist atmosphere for its sustenance. It went in a fat pig of 160 pounds and came out after 160 days alive but a lean pig of 49 pounds. Think of the number of sick people to whom, or for whom, that offers a valuable lesson as to treatment. The bulky fat man or woman with small congested and bronchitic lungs and kidney and liver congested also—I often long to put that patient on a very restricted diet of almost water. But there are very few patients, and fewer still of the friends, who have sufficient faith in a rigorous abstinence of this sort to allow one to carry it out. You can carry out a very restricted diet for aneurysm, in which case the patient is not obviously so seriously ill. You can carry it out under the name of the "Salisbury treatment," when men or women find their size inconvenient, but try severely to restrict food when anyone is very ill with such conditions as I have mentioned and it is a very different matter.

I spoke a minute ago of our forgetfulness of the knowledge that is in us. Let me say a word more on this head. We forget in a wide sense our own experience. For example, I often see a case that I think needs opium but where that drug has been withheld because of a supposed or actual disease of the kidney. There are few ideas more prevalent amongst us than that it is dangerous to give opium in cases of renal disease. That doctrine once, I suppose, crept out of the mouth, or out of a book, of some teacher of repute and has been handed on and on with increasing volume, till to-day it has become a prevalent belief. I have, I believe, heard it myself out of the mouth of a lecturer and when I have accompanied him to the wards I have found his patients taking, with renal dropsy, five-grain doses of Dover's powder every four hours. His memory slept. Many of you, I doubt not, withhold opium where you would otherwise have given it because there is some albumin in the urine and yet if you think back you will remember that you have often been obliged to have recourse to it and when you have, never, so far as you can remember, with any adverse result. I ask myself whether I have ever seen any harm come of the use of the drug in such circumstances and all I have to say is that years ago in a case of granular kidney, where the patient was very seriously ill, I did give a dose of morphia by subcutaneous injection from which he never woke; but I wish my memory *had* slept over *that* case, for I am quite convinced that its recollection has often unjustly hindered my recommending the use of morphia when from my heart of hearts I believed that the drug administered in this way was the only one likely to relieve the patient's sufferings At any rate, there is no doubt that morphia carefully administered by the *mouth* in these distressing cases of cardiac asthma, in renal disease, is not dangerous; and, indeed, they can often enough only be relieved by the same drug administered subcutaneously. The only cases in which I am afraid to give opium, and in which I feel sure there is a very real danger, are where the blood is dammed back in the lungs in chronic bronchitis or an extensive pleuritic effusion. This does not include an ordinary pneumonia, where, as you well know, opium is often a most valuable drug.

And this sleeping memory is ofttimes very unfortunate for our diagnosis. In thus making us forget what we have seen we too often miss the broad points of a case which, if seized, would point unmistakeably to a correct opinion. Thus it is, too, that we are inclined to pin our faith too absolutely to the latest achievement of research and are again very likely to go wrong altogether. I have seen striking examples of this at one time and another. Within the last year, for example, it has twice occurred to me to see cases where the presence of Widal's reaction had made the diagnosis lean in the direction of typhoid fever, where I venture to think that without that test the prominent facts were all in another direction. In each case there was an intra-peritoneal abscess. Diagnosis is never a question of one symptom, it is always a balance of probabilities, and it needs to be remembered that often enough the balance is exceedingly delicate. Still, I think that mistakes would be fewer were we more to content ourselves with gathering up the salient features of a case instead of allowing ourselves to be diverted by interesting subtleties.

Then memory sleeps to-day—alas too often—over the great facts of heredity and environment. In what single disease, as we know it to-day, can we say that the sway of heredity is undisputed as it once was? Take cancer—and its occurrence is attributed to the Thames—or I suppose some other river—valley, to a particular house or houses, or to some hypothetical germ which we are trying hard to find and shall probably before long succeed in demonstrating. For tubercle we have its germ and its cure—the open air. There was a time when the insurance offices loaded you heavily for a consumptive father, and refused you altogether for a weak-chested mother. They surely must relax their penalties now. Acute rheumatism is due to a germ; other forms of arthritis also; and even gout, by being an arthritis, lies under a suspicion. All these diseases were supposed to be strongly hereditary, but now—oh dear no! that is quite out of date. *But a poor fellow comes into my room* with bolting eyes, panting breath, and a heart that has run amuck—tachycardia we call it and attempt to treat it as of course we must do—but [illegible] 's only a symptom. His *dis*[illegible] of the nervous system wit[illegible] ed with the fact that the great world has used him up in its relentless efforts to add to her gains. This man's brother has a slow creeping paralysis of many years' duration and *he* has Graves's disease. Yes, my friends, bear this in mind, that the world will use you up if you let it do so. And when you die before your time it will say—Ah! poor fellow, it is a pity he worked so hard. And that is all the thanks you will get, and it is a poor sort of bread-and-butter for your wife and children. You had better, everyone of you, take a good holiday every year and enjoy its inspirations—for they are many—while you have the opportunity, and what is more the desire, and keep your health. For the world *is moved by forces that it knows not* of and as such is instinctively selfish, and it will use you for its own purposes and grind you wonderfully small in its everlasting mills, and that without the smallest ultimate advantage to you.

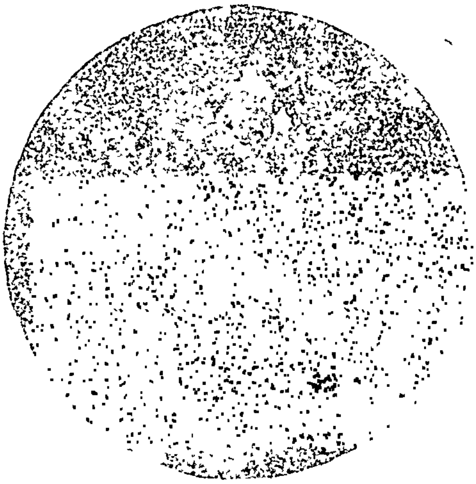
Here is another case that comes before me as I write of a similar kind and which teaches the same lesson. An officer in the army ascribes all his ailments to overwork in preparing for an examination. At any rate he never afterwards felt well and when summoned to go abroad in the Boer war he was so limp that he could hardly put one foot before the other. Yet when in it he bore himself so that his enemies had a care for him and he seems to have obtained both health and credit. But as soon as he came home, expecting to remain well for the future, he speedily fell back into his old limpness, in which he suffers badly from depression; his bowels became obstinately constipated; he could not think; he could not remember; he could not even write his letters sometimes, for his hand seemed to forget its cunning. He attributed all his woes to his constipation and his liver—and there are those, it must be admitted, who would entirely agree with him. Unfortunately, I am not one of them, else haply I might believe that a little medicine might put him all right. But I know otherwise. I know that his father was like him, suffering similarly with depression and like his son of a worrying and anxious temperament. I know, also, that I have to subvert a deeply set characteristic, to cure which it is necessary for him to let the present be as nought, while he sets himself to build him *a bridge of hope out of the relics of the well-nigh forgotten* past. No one who has gone through the experience will think this an easy treatment, for it discloses to the anxious mind precipices and possibilities on each side of it that may well make even a stout heart quail and these hearts are for the moment not stout. And yet, if the memory does not too soundly sleep, it is clear since, to take the particular case, the man went through an arduous campaign there can be no disease and that there can be nothing that in the future he may not outstrip and disentangle himself of. But memory sleeps, and men make too much of these mental and nervous aberrations; they think they are important when indeed they mean little, for I take it that they are often no more than the equivalent of the twinge of pain in a peripheral nerve or the more prolonged neuralgia of some one or other of the organs about which one would never think of taking a hopeless or even a gloomy view.

How often people are troubled about their memory when there is in truth little fault to find. I suppose there is no commoner cause than this for seeking the advice of a medical man—"My memory is so bad," and this is supposed *to mean that the brain is going.* The memory sleeps It may not be a very convenient recreation but it is not one of ominous import. For in the present day with the multiplicity of detail that attempts to find an entrance the brain of man tends to become somnambulistic. As you well know, the somnambulists, or some of them, although remembering nothing of their somnambulistic actions or observations, will nevertheless sometimes give certain evidence that although they cannot recall them they are yet within the register of the brain. A case of this kind is narrated by the late Dr. William Carpenter in his "Mental Physiology." A man dreamed a dream with certain peculiar conditions of crawling lizards as its subject for the origination of which no explanation was forthcoming, and he was telling it at the breakfast-table when he came downstairs, when it was pointed out to him that it had obviously been conditioned by the clock upon the mantelpiece which *he could not remember that he had ever seen. But of course* he had taken it in when he had been talking the night before, and there it was in his subliminal consciousness, all unknown to his conscious self. Now this condition is quite a common one nowadays. One's brain being intently occupied in one direction, some fact in quite a different direction is told and apparently intelligently accepted. And yet thereafter there is not the slightest recollection of the fact. The fact is probably there all the same and your mere forgetfulness of it is no matter of consequence. A stronger case than that might be given of the man who, writing many letters in the day and keeping no register of them, may have written a particular letter, even going into a fair number of details, and yet afterwards be quite uncertain whether he has written the letter or no.

Another case of a sleeping memory that occurs to me is the exceedingly unpleasant one of the sudden cessation of thought that occasionally comes to some in the very middle of making a speech or extempore address. Suddenly in the full flow of thought a blank comes and they know not what of the future, while memory and thought take a nap. How common it is, too, that after sleep memory wakes behind the man and for some seconds he cannot tell where he is and, more, could not speak *of any fact of his daily life save only* that he exists. Uncanny, indeed, are many of the sudden jolts and stoppages in the even flow of nervous action, and so is the sudden intermission of the heart to some people, but they are momentary and unimportant if one can only believe it. They are well typified by the sudden jolts in your electric circuits which restore themselves almost as soon as they occur.

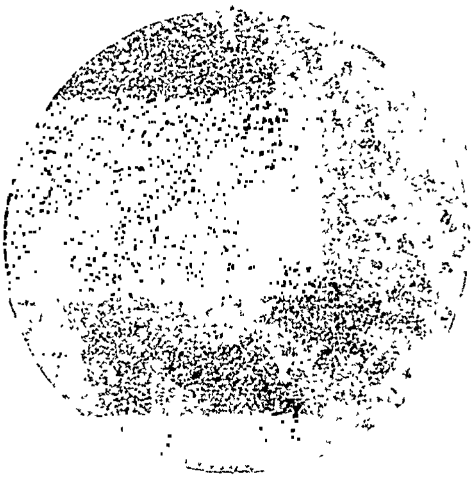
The brain is subject to the same conditions and laws as other organs; only its expressions of illness vary and much of what is pain in other parts becomes a disturbed sensation of other sort—disordered thought, disordered sense of this or that order. I saw a lady only this morning who after a bad migraine—it is truly a very bad one—perceives a bad smell, which is clearly a brain smell, not a nose smell—that is, it is generated in the centre and not at the periphery. If we could but in all these mental phases remember this, that brain sickness must express itself in terms of brain function, intellectual, subliminal, of the special sense centres, &c., as the case may be, how much misery would be saved, how much more rational would our advice be, how much more successful would the results in all probability turn out. Why should a man *with a dull head or a sensation of worms* crawling about inside his head, or with a memory worse than it was of yore, and so on, think that he is losing his reason [illegible] any more than [illegible] his limb is on t[illegible] labouring under [illegible] which he is prone to take very [illegible] *brain maladies of more or less* similar origin and which, equally with those of the subordinate viscera, will certainly have that natural tendency towards recovery that in those leads us to expect it. But memory sleeps and the brain, which keeps all the rest in normal appearance, a fact suggesting that while the amount of serum given was sufficient to affect the organisms in the bubo it was too small to influence the bacilli throughout the body generally. In this connexion it must be remembered, however, that the serum causes no such alteration "in vitro." This local effect of the serum on the bacilli in the inguinal bubo is shown in the accompanying illustration (Fig. 1), where the coccoid degeneration, the indefinite outline of the organisms, and the total loss of bipolar staining are very apparent. These appearances may be contrasted with those shown in Fig. 2, where the characteristic bipolar staining of the bacilli present in the spleen is very evident.

FIG. 1.



Degenerated plague bacilli from inguinal bubo after subcutaneous administration of serum. Fourth day of illness. × 1000.

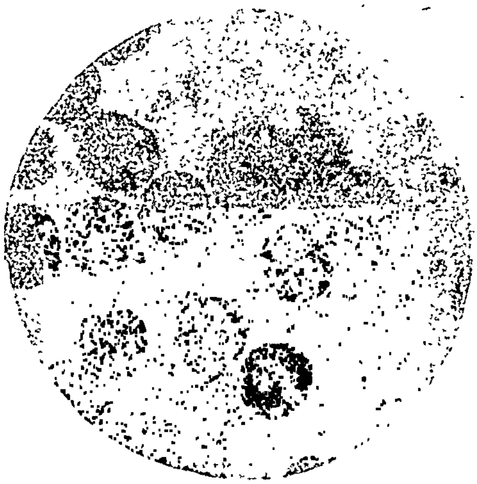
FIG. 2.



Showing characteristically stained plague bacilli in spleen of same case. Fourth day of illness. × 1000.

As in some measure tending to confirm the view that those changes were due to the serum administered another fatal case of plague, in which curative serum was given both subcutaneously into the drain of the affected glands and also intravenously, may be cited. This patient was admitted to hospital on the fifth day of illness with a large and characteristic plague bubo in the right inguinal region. She was so seriously ill that no hope was entertained of her recovery, but 80 cubic centimetres of Yersin's serum were given subcutaneously by Dr. J. Brownlee into the inner aspect of the affected thigh. The following day she appeared much worse and 100 cubic centimetres were again given subcutaneously into the abdominal wall and 40 cubic centimetres intravenously. The same evening the patient died suddenly from acute heart failure. If the degenerative changes just described were the result of the local action of the serum on the organisms in the bubo it might reasonably be expected that similar changes would be found in the organisms present in the spleen and other tissues if the serum were administered intravenously. These conditions were actually found in the case just described and in the accompanying illustrations (Figs. 4 and 5) the changes in the morphological characters of the bacilli after the combined subcutaneous and intravenous administration of serum are clearly shown.

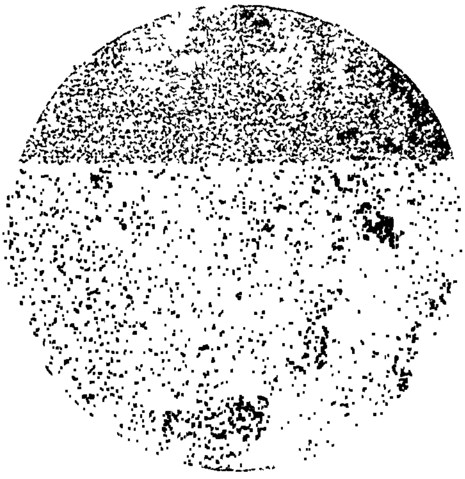
FIG. 3.



Bacillus pestis from bubo prior to administration of serum. Shows well-marked polar staining. Gentian violet,[2] × 1000.

From an examination of these two cases it became apparent that a hitherto unnoticed mode of action of plague curative serum was evidently at work—viz., a directly bactericidal effect. In any disease of bacterial origin the effects produced—as evidenced by the symptoms of the disease—are generally ascribed not so much to the presence of the bacteria themselves (except in those instances where their rapid multiplication mechanically obstructs the blood-vessels—e.g., anthrax) as to the specific effect of the toxin formed by them. To combat such a disease the remedy employed has to perform a double function: (1) the toxin

FIG. 4.



Bacillus pestis in bubo after subcutaneous administration of serum. Shows coccus-like degeneration of bacilli. Many of the more degenerated unstained shadowy forms are not visible. Gentian violet, × 1000.

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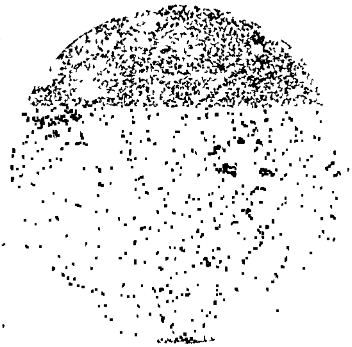
[2] This illustration, as also the preceding (Fig. 2), gives a very deceptive impression of the number and appearance of bipolar-staining bacilli. The number of normally staining organisms on the cover-glass was in reality very considerable.

already existing has to be neutralised, and (2) the bacteria have to be destroyed or their growth inhibited so that the further production of toxin may be lessened or arrested. The more or less considerable improvement in symptoms which has been found to follow the administration of Yersin's serum is in itself sufficient proof of its powerful antitoxic effects. From the microscopical observations just detailed, however, we have anatomical evidence of the bactericidal properties of the remedy. The serum apparently induces a degeneration in the bacilli themselves and these marked structural changes are bound to be associated with a considerable interference with their toxin-producing power. The remedy, therefore, strikes directly at the proximate cause of the disease—the bacilli—and also neutralises the toxins which have been produced. The evidence so obtained from microscopical examination, not only encouraged the freer exhibition of the remedy, but also gave a clue to the method which was ultimately found to yield the most beneficial results. Adequate doses had first to be administered locally in the drain of the bubo, so that the maximum bacillary degeneration might be speedily effected and the production of toxin arrested, and further, in order to reach those bacilli which might have escaped to the spleen or other organs and also to neutralise the toxin already existing in the blood the intravenous method of injection was indicated. Anatomically, it has just been shown that the serum has a local specific action on the bacilli in the bubo and that when introduced into the general circulation a like change was observed in those bacilli which had become lodged in the viscera. The microscopical evidence of bacillary degeneration in the spleen (shown in Fig. 5) encouraged one in the belief that larger doses of the serum intravenously would produce a still more decided change in these bacilli. Subsequent trial of this method was followed by clinical results which seemed to justify this assumption, but as all the cases so treated fortunately recovered no bacterioscopic information could be obtained of bacillary degeneration in deep organs. At this stage it may be of interest to recall briefly some of the cases in the earlier outbreak of which the following are the charts (Charts 1 and 2).[3]

FIG. 5.



Bacillus pestis in spleen of the same case after intra- [illegible]

CHART 1.

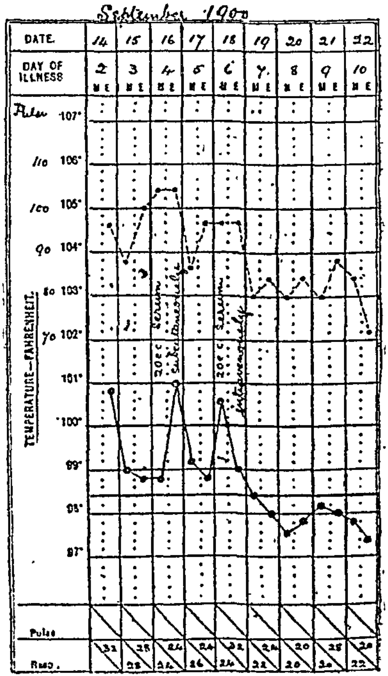
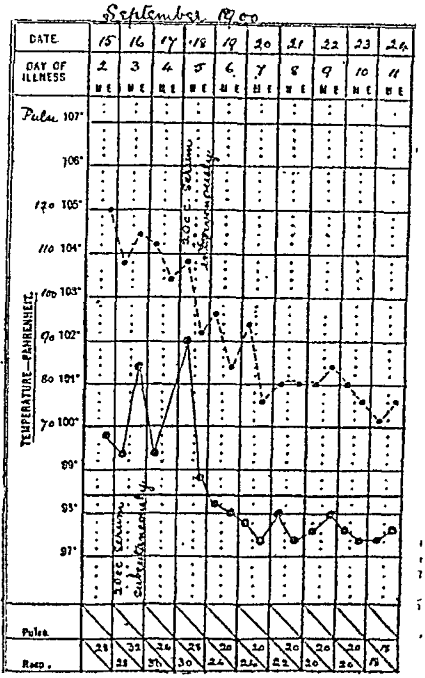


CHART 2.



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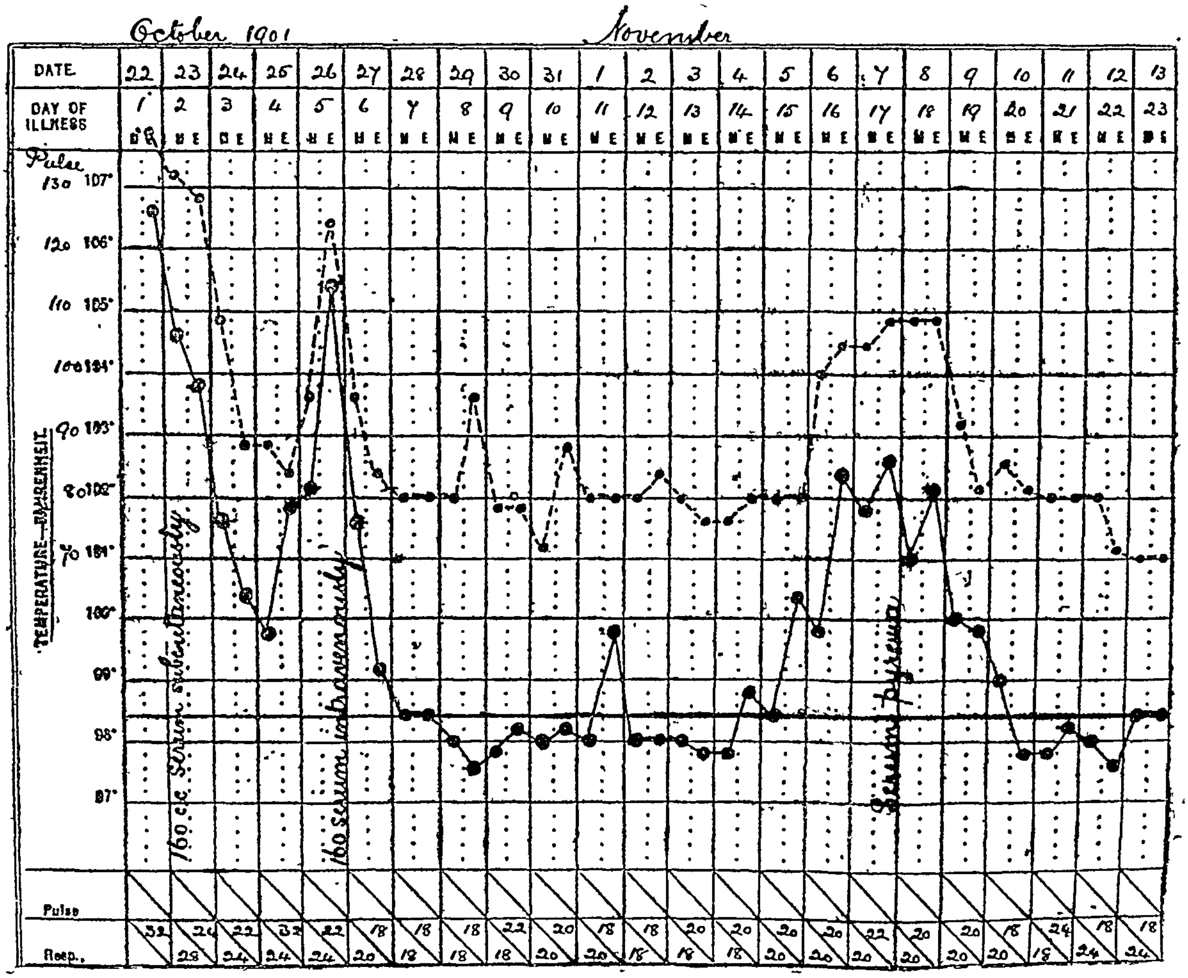
[3] Report on certain cases of plague occurring in Glasgow in 1900, by the medical officer of health, pp. 42 and 51.

It will be observed that after the subcutaneous injection improvement, as evidenced by fall in temperature and pulse, set in, though this was of temporary duration. On the other hand, when the intravenous method was employed the improvement was more decided and permanent. At the time when these cases were under observation no experience of the serum treatment of plague had been acquired and the remedy was used in a somewhat tentative manner until familiarity with its effects led to its freer exhibition. The cases just cited, though of a mild type, were proved to be genuine cases of plague, not only on clinical grounds but also by a complete chain of bacteriological evidence. It will be noted, however, that the serum was given in comparatively small doses. In the second outbreak of plague even more severe cases than were met with in the first epidemic were treated with comparatively large doses of serum, subcutaneously and intravenously, the experience already gained having encouraged this practice. The results were eminently gratifying, as several exceptionally severe cases recovered under this more energetic line of treatment, but, of course, in these fortunate circumstances no evidence could be obtained of degeneration induced in bacilli throughout the body. The following two cases from the second outbreak are selected as being of an exceptionally severe type.

CHART 3.

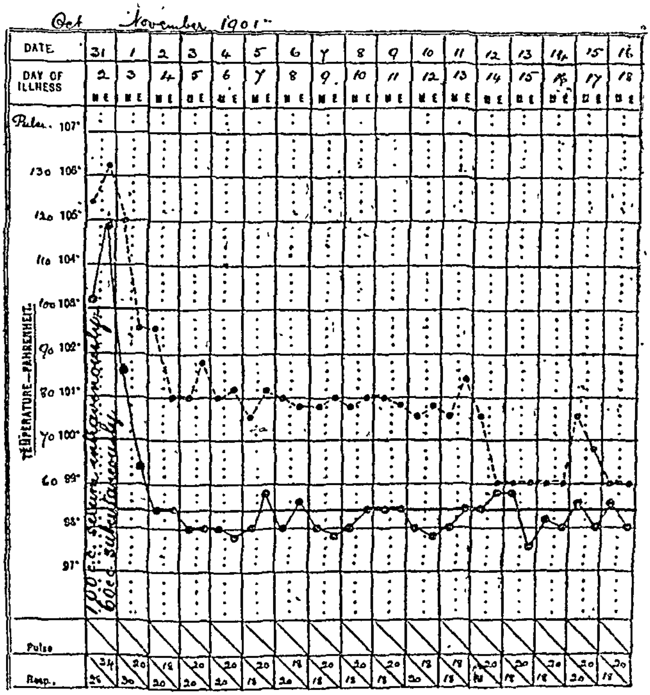


Temperature Chart of Case 1.

CASE 1.—A woman, aged 23 years, was admitted to hospital on Oct. 23rd, 1901. She was first seen by Dr. J. F. Fergus and the following is his note on the condition of the patient prior to her admission. "About 11.30 on the night of Tuesday, Oct. 22nd, I was called to see a young lady, an employée in a hotel in the city. I found the patient violently ill, complaining of severe pain in head and body, vomiting slightly and very much flushed, the face being markedly so, and the conjunctivæ suffused. She seemed seriously ill and answered my questions in a curious, slow, scanning sort of way. I had already seen this patient about two or three weeks previously for a suspected gastric ulcer with purely gastric symptoms, and the pain on the present occasion being referred principally to the abdomen I at first thought that the present illness might be a return of the former, but on taking her temperature it was 106·6° F. and her pulse was running close on 140. As she was in extreme pain I gave her one-third of a grain of morphia hypodermically and stayed for some time to watch the case. I then made a more systematic examination of her and found a generalised scarlet rash on the trunk and also to some extent on the limbs. On palpation there was no special pain in the abdomen but in the right groin below Poupart's ligament was an exquisitely painful glandular swelling of about the size of a filbert. There were no swelling of the lymphatic vessels in the leg and no injury or abrasion of the limb. She had a slight sore throat of no great severity and without spots and there was no enlargement of the cervical glands or of those in the axilla. The clinical features of this case seemed to me to present an almost typical picture of the classical description of bubonic plague and before leaving the hotel I arranged for her immediate removal to Belvidere Fever Hospital. My suspicions had been particularly aroused by the assistant housekeeper mentioning casually that the patient had been complaining of a smell in the dessert-room where she worked and on my making more particular inquiries I learned that rats had been dying throughout the hotel in greater numbers than usual."

When admitted to hospital the patient was evidently acutely ill; the face was deeply flushed, the eyes were suffused—in fact, congested—and the pupils were widely dilated. The tongue was moist and clean and showed no enlargement of the filiform papillæ. The fauces were slightly congested. The skin was hot and dry and both the trunk and the limbs were covered with a uniformly bright erythematous rash which momentarily faded under pressure, showing the skin to be perfectly pale and devoid of any of the usual yellow staining commonly seen in scarlet fever. The expression of the face was dull and heavy yet anxious and the patient, though able to answer questions more or less intelligently, was evidently only half-conscious of her surroundings, for it was subsequently ascertained that she had no recollection of the bubo being punctured or of the first administration of serum. The condition of the bubo was as described in Dr. Fergus's note and so exquisitely tender [illegible] bubo by means of a sterilised hypodermic needle and from this cover-glass films were made and glycerine agar tubes were inoculated. *Immediate examination of the films*, after staining with gentian violet, showed the presence, though in comparatively small numbers, of a short bipolar-staining bacillus morphologically identical with that of plague. When treated by Gram's method the bacillus was decolourised. The inoculated tubes were incubated at 37° C and 36 hours later a faint white surface growth had appeared composed of small translucent colonies with serpiginous margins. Microscopical examination of cover-glass preparations made from these colonies showed a bacillus morphologically ide[illegible]ning reactions to, [illegible] the cultures an[illegible] the organism as [illegible] 160 cubic centi[illegible]ered subcutaneously on the same afternoon, the seat of injection being the thigh and in such a position that the serum would be absorbed by the lymphatics draining towards the affected glands. *This was immediately followed by a very rapid and striking amelioration* in both the local and general condition of the patient, improvement setting in within six hours after the serum injection. The temperature abruptly fell from 106·6° to 100·4° the following evening and with this was associated a *corresponding reduction in the pulse-rate from 132 to 88.* The patient was now perfectly conscious, the severe headache had entirely disappeared, and she spontaneously expressed herself as feeling much better. These favourable symptoms were associated with equally satisfactory changes in the bubo, the pain and tenderness of which were so much alleviated that it could be freely palpated without giving rise to any discomfort. This improvement, however, was short-lived, for on the next evening the temperature rose to 101·8° *and during the succeeding 24 hours it continued to rise till at six o'clock on the evening of the 26th (the sixth day of the illness)* it stood at 105·4°. The pulse also was correspondingly rapid and more compressible than formerly. The bubo had increased somewhat in size and had again become acutely tender, whilst her general condition reverted to that on admission. At this stage 160 cubic centimetres of serum were injected intravenously into the median basilic vein, and this was happily attended by even more gratifying results than those witnessed after the first administration of serum. Within 36 hours the temperature had fallen by a rapid crisis from 105·4° to normal and with the exception of a trifling rise on Nov. 1st the latter figure was never exceeded during the following week. Defervescence was accompanied by a rapid and complete disappearance of all the threatening symptoms, by first a lessening and then by a complete cessation of pain in the bubo, and by a rapid return to consciousness and feeling of well-being. During the next few days the bubo enlarged somewhat and became highly inflamed though not at all

CHART 4.



Temperature Chart of Case 2.

painful. By the end of the second week it was quite fluctuant and in appearance resembled an acute abscess. Spontaneous resolution, however, occurred without external rupture. Convalescence was rapid and complete and with the exception of some sharp febrile disturbance during the third week—due to severe articular pains consequent upon the administration of the serum—it was uneventful. The patient was dismissed on Dec. 12th and at this date the bubo was represented by a small horizontal chain of enlarged and indurated glands, quite devoid of pain and more or less firmly adherent to the skin and subjacent tissues.

To meet the extreme urgency of the case it was decided to administer a large dose of the serum subcutaneously (160 cubic centimetres as compared with from 20 to 60 cubic centimetres in former cases). So far as the immediate result was concerned the treatment seemed to be successful, but the improvement was short-lived, for, as has already been noted in the mild cases, the temperature quickly rose again and the patient's condition became almost as bad as before. The local symptoms having subsided somewhat, but the general condition of the patient pointing to increased action of the toxins on the system, it was considered advisable to administer more serum intravenously. 160 cubic centimetres were accordingly introduced into the median basilic vein. Almost immediately thereafter a marked improvement occurred which continued until nine days later when the usual serum pyrexia made its appearance (Chart 3).

The second case was also of a very severe type and occurred in association with the preceding.

CASE 2.—A woman, aged 33 years, was admitted to hospital on Oct. 31st, 1901. The patient had been "out of sorts" for a few days prior to the actual commencement of her illness, but the onset of severe symptoms occurred quite suddenly on the morning of Oct. 30th. She then became ill with violent headache, sickness, and vomiting, and pain in the left groin. All these symptoms rapidly increased in severity during the next 24 hours and on the following morning she was admitted to hospital in a profoundly prostrated condition. As in many respects the case was precisely similar to the preceding it is perhaps unnecessary to enter more fully into the details of the illness. The constitutional disturbance was considerable, the temperature being 104·8° F. and the pulse being 124. A relatively small but exquisitely painful bubo was present in the left groin about one and a half inches external to the spine of the pubes. The glands affected were those of the horizontal inguinal chain and so sensitive were they that the slightest pressure caused the most acute agony. On account of the gravity of the illness it was decided to at once administer serum by the combined method. 60 cubic centimetres were accordingly introduced into the lymphatic drain of the bubo and 100 cubic centimetres were introduced under hydrostatic pressure by means of a transfusion cannula into the median basilic vein. The reasons for administering serum both subcutaneously and intravenously have already been discussed and a reference to Chart 4 is sufficient to indicate the beneficial results which followed upon this line of treatment. Within 36 hours the temperature fell from 104·8° to normal and subsequent records never exceeded 98·8°. The pulse-rate was likewise lessened by 50 beats per minute. As in the previous case, a striking diminution in the tenderness of the bubo occurred a few hours after injection, its further development appeared to be arrested, and spontaneous resolution occurred without rupture and without any apparent softening or inflammatory reaction. Convalescence was rapid and complete and when the patient was dismissed on Dec. 12th, 1901, the site of the bubo was indicated merely by two small indurated but perfectly painless glands about one inch outside the pubic spine.

Profiting by the experience already gained in the previous case serum was at once administered by the *combined method.* It was hoped by this plan to arrest the further production of the virus locally in the bubo and also to completely neutralise the toxin circulating in the blood. Both of these expectations were fulfilled, as was shown by the rapid and permanent improvement which took place locally and generally. The theory held regarding the previous case was that the primary fall of temperature depended largely upon the destructive action of the serum on the bacilli in the bubo and the neutralisation of the toxin in its immediate vicinity. The secondary rise, on the other hand, was believed to be due to the toxin already circulating or present in the various organs—e.g., the spleen, to which some bacilli might have gained access, and which, having escaped the local action of the serum given subcutaneously, continued to exert unimpaired their toxin-producing power. It must be admitted that the number of cases is too small to warrant general deductions, yet the experience gained is at least sufficient to suggest a more extended trial of what, in our limited experience, seems to be the most efficient method of administering plague serum. Beginning with the milder cases we find temporary improvement following upon subcutaneous injection, the final improvement depending upon the subsequent introduction of the remedy intravenously. Finally, it becomes evident from due consideration of the degree and nature of the improvement effected by the different methods that in severe cases the most satisfactory results are obtained by the simultaneous administration in adequate doses of subcutaneous and intravenous injections of Yersin's serum. This method, as is well known, was first suggested and employed by Calmette and Salimbeni during the Oporto epidemic in 1899.[4]

Conclusions.—The experience gained during the two recent outbreaks of plague in this city seems to warrant the following conclusions: (1) that Yersin's serum is a remedy of the greatest value in the treatment of bubonic plague; (2) that its action is bactericidal, as shown by the degeneration induced in the bacilli, as well as antitoxic; (3) that this double action of the serum is best secured by its early administration in large doses, both subcutaneously into the lymphatic area which drains towards the bubo, and also intravenously; and (4) in very mild cases subcutaneous injection alone will probably suffice, but in severe cases the combined method should be employed. For these latter the initial combined dose should be perhaps from 150 to 300 cubic centimetres, the proportion given intravenously varying with the relative severity of the general symptoms.

Glasgow.

A CASE OF TRANS-SACRAL REMOVAL OF AN INTUSSUSCEPTION WITH MALIGNANT GROWTH BY A METHOD UNUSUAL AT PRESENT.

BY ARTHUR E. BARKER, F.R.C.S. ENG.,
SURGEON TO UNIVERSITY COLLEGE HOSPITAL, ETC.

A BRIEF record of the following case may, I venture to think, prove useful to those who like myself are much exercised in their minds as to the proper course to take in regard to the treatment of carcinoma of the rectum. On the one hand we have to decide whether simply to palliate by colotomy or on the other whether a more radical operation for the removal of the growth is called for. And if we answer the last question in the affirmative we have to settle in our minds which of many procedures holds out the best prospect of permanent success. The pathological condition, too, met with in this case has many points of interest.

A single woman, aged 52 years, was sent to me on April 29th, 1902, by Mr. F. Hart-Smith of Leominster with the following history. She was reported to have had for a couple of weeks before being seen a discharge of blood and mucus from the bowel without obstruction, distension, or pain. On examination her medical man felt an ulcerated mass in the rectum which he took to be carcinoma, in which, as it turned out, he was quite correct. I was surprised, therefore, when I first examined the rectum to find nothing abnormal with my finger, although the latter came away covered with blood-stained mucus. I then introduced a long glass Ferguson's speculum and examined with a good electric light. But nowhere could I see anything abnormal except some blood and mucus which came from high up. Nevertheless, I felt sure that my old friend's diagnosis was correct and that I was unable to find what he described because it had slipped up. I took the condition to be one of a carcinomatous ring causing an intussusception which had become reduced. This, although not very common, is a condition most likely familiar to many surgeons and one on which I have several times operated. I wrote in this sense to Mr. Hart-Smith and recommended large high-reaching enemata. A week or two later he wrote that the enemata had brought away an *enormous* quantity of fæces, but that he had never been able to detect the rectal growth again. But, on the other hand, he had felt a lump in the left groin. The patient was much relieved at first, but towards the end of May obstruction set in which was not overcome by enemata and on June 6th she was admitted into hospital.

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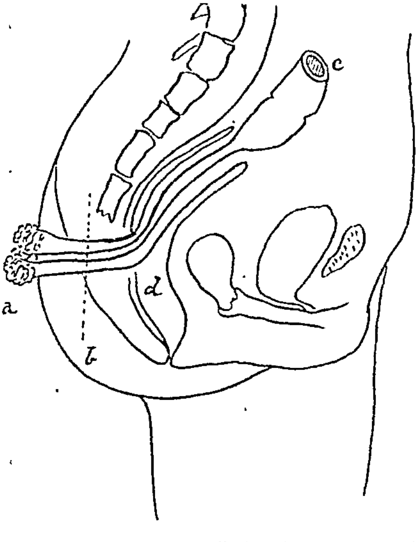
[4] La Peste Bubonique, par Calmette et Salimbeni, Annales de l'Institut Pasteur, Decembre, 1899, p. 899.

The growth was now again felt in the rectum close to the anus and the finger could be passed round it on all sides or into its central lumen. There could be no doubt that we had before us a growth seated at the apex of an intussusceptum. The only question which remained was whether to perform a palliative colotomy or to attempt to remove the growth. As the latter was ring-like and seated on an intussusception I felt that its complete excision ought to be easy. But the question how was the difficulty. As the mass had at one time receded altogether out of touch and sight from the rectum it appeared to be clear that the meso-sigmoid must be very mobile and that the ring of neoplasm probably belonged to the sigmoid flexure. And having had some favourable experience of the removal of such growths through the groin it occurred to me that if it could again be reduced I could more easily and completely excise the growth from the groin than from below and make an "end-to end" junction of the bowel from there as I had recently done in other cases.

On June 12th, therefore, I opened the left groin and tried to pull up the intussusception within reach. This failed though I could feel it jammed in the pelvis. The wound was closed and the patient was put in the lithotomy position. I then dilated the anus and tried to pull the intussusception down for excision through the anus. Here, too, I failed, as it appeared to be fixed too firmly. Until the wound in the groin was healed nothing further was done. Then on July 10th I proceeded to remove the growth by the trans-sacral operation, employing a method which appeared to me to be novel so far as my reading and observation go.



a, Growth drawn out for excision at line *b*. *c*, Flexure intussuscepted into the rectum, *d*.

In the first place, a curved incision as usual was made, commencing on the left side of the lower part of the sacrum and ending in the middle line, a little below the tip of the coccyx, with the curve, of course, to the right. Through this opening the whole of the coccyx was dissected out with as little damage to its muscular attachments as possible and then about an inch of the lower end of the sacrum was removed with bone forceps in the usual way in such trans-sacral operations. Through the opening thus made an incision was made in the soft structures in the middle line until the wall of the rectum was exposed. Through it the mass of the intussusception could be felt easily at about the level of the coccyx. Over it the rectum was divided in the middle line and through the opening thus made the intussusceptum was drawn outside the intussuscipiens. There was no difficulty in doing this or in obtaining complete control over it. The left index finger was now thrust up the lumen of the intussusceptum while the thumb closed upon its outer surface above the growth. But although there appeared to be no small bowel intruded between the two layers of the intussusceptum it was thought better, before proceeding further, to open the outer wall of the intussusceptum to make quite sure. When by this opening it was seen that no small intestine was included between the serous layers, the latter were sutured together by transverse linen-thread sutures passed from without through all the coats into the central lumen of the intussusceptum. This ring of sutures was placed well above the growth and when completed the whole intussusceptum was cut off transversely about a quarter of an inch below the line of suture. The edges of the cut surface were then overcast with a continuous suture and when the stump had been cleansed it was allowed to slip back through the opening in the intussuscipiens and the latter was closed with a continuous suture. The whole of the wound was now covered by an apron of gauze which was thrust into all its pockets and filled with strips of iodoform gauze and the skin was sutured at both ends, leaving the wound open at its middle.

The patient bore the operation well and the large wound closed slowly but steadily. There was a slight fæcal discharge through the wound in the intussuscipiens for some days from the seventh day after operation, but it ceased soon after one stitch was discharged. The patient left the hospital on August 14th, a little more than a month after the operation. She came to show herself on Oct. 14th, looking quite well and without any trouble except some discomfort when sitting down for long and leaning back. She had complete control over her motions and over flatus, which was only to be expected as there had been no interference with the sphincter apparatus or its nervous supply except by the initial stretching of the anus, which, as we know, is soon recovered from.

In this mode of dealing with a growth seated on an intussusception I followed a plan which I proposed at the Royal Medical and Chirurgical Society in the year 1887,[1] in replying to a question put to me by Mr. C. Heath, *apropos* of a somewhat similar case of his own. It was comparatively easy to carry out here and I venture to recommend it for similar cases. The advantages in a case suitable for its employment are obvious. The loss of the coccyx is a small matter and the rest of the operation can be carried out without interference with the sphincters or any other essential structure. The peritoneum is, of course, opened for a moment, but under such conditions that any risk of infection is small and easy to meet. And the fact that the growth is seated on an intussusception which allows of excision far above the invaded area appears to me to give a good prospect of non-recurrence. Possibly it may be of limited application, but I am not so sure. It might be possible in some cases of carcinoma of the sigmoid flexure or higher portion of the rectum without intussusception to open the rectum below the growth and to pull down the growth, as in this case, and so produce the condition of things which was here found to be so easily dealt with.

In the debate in 1887 referred to my description of this operation proposed then, so far as I know for the first time, ran as follows.[2] Replying to Mr. Heath, who inquired what was to be done in a case where the intussusception could not be drawn outside the anus, as in a case which he had had, I said: "I should certainly do a laparotomy in that case. But if I were dealing with a condition exactly like that to which he refers I should be inclined to excise the whole intussuscepted mass (*in situ*). I remember his case very well and I think had it been possible to diagnose it before operation began the whole intussusceptum might have been excised without a very great deal of risk to the patient. I have for a long time past had an idea of an operation for such a condition which I should like to have an opportunity of carrying out. Given the intussusception I should search for the upper part. I would make use of Czerny's suture to put in a row of stitches and stitch up the whole of the upper margin and *afterwards cut off the intussusceptum through the convex margin of the intussuscipiens*, which would afterwards be closed by suture. It is quite clear to my own mind that one would imitate nature by that method—that is to say, take the intussusception as it stands and, taking the point where nature usually throws out a quantity of lymph, put in a row of sutures without disturbing the part in the least, cut off the intussusceptum through the longitudinal incision, and then sew up the open gut."

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[1] THE LANCET, May 14th, 1887, p. 980.

[2] Proceedings of the Royal Medical and Chirurgical Society, 1887, p. 260.

For some time after that I had no opportunity of trying this method proposed in 1887, but later I used it in an ordinary case of intussusception in a child. The case was published with figures explaining the method.[3] Later still Dr. Widenham Maunsell proposed the same method and it is usually called by his name. In the case now recorded it was used in the trans-sacral operation, but the principle is the same.

Some of the speakers in the debate referred to seemed to think that the condition in the rectum in which a new growth is seated on an intussusception is not so rare as I was then inclined to think. If this is so such an operation as that which is described in this paper ought to be useful in a considerable field.

Harley-street, W.

ACUTE AMAUROSIS FOLLOWING INFANTILE CONVULSIONS.[1]

BY HENRY ASHBY, M.D., F.R.C.P. LOND.,
PHYSICIAN TO THE MANCHESTER CHILDREN'S HOSPITAL;

AND

SYDNEY STEPHENSON, M.B., C.M., F.R.C.S. EDIN.,
OPHTHALMIC SURGEON TO THE NORTH-EASTERN HOSPITAL FOR CHILDREN, LONDON, ETC.

ONE of the present writers[2] has recorded a number of cases of amaurosis in infants in which the blindness was due to attacks of posterior basal meningitis which had ended in recovery. We propose to bring before the society on this occasion another group of cases of amaurosis in early life which we believe is entirely distinct from the post-meningitis group and owes its origin to severe convulsions. It is not uncommon in the out-patient room to get a history from a mother that her infant or child was left blind for some weeks or longer after having had a severe series of convulsions. We may get such a history when investigating cases of "infantile hemiplegia." The story runs that the child was convulsed for some hours and when he became conscious again he was blind and that his right arm and leg were paralysed. The sight completely returned but not the power in the limbs. In other cases the paralysis has been but slight and the paresis disappeared before the amaurosis. No doubt much caution must be exercised in drawing conclusions from the history given from friends as to the condition of the infant's sight. Such unskilful observers as the parents of out-patients usually are will be likely to confuse "unconsciousness" or "mind-blindness" with loss of sight. Moreover, the blindness spoken of might be due to posterior basal meningitis or to a temporary papillitis. But after putting on one side all sources of error and excluding doubtful cases, there remains a group in which a more or less temporary blindness is "post-eclamptic"—that is, follows as the result of a series of convulsions with coma which remind us of the "status epilepticus" of adults. The amaurosis may be accompanied by aphasia and hemiplegia of a temporary or more lasting type. It may be objected that convulsions do not constitute a "self-standing" disease, but are only accidental complications of many pathological states, and this is no doubt true, but our point is that whatever their origin the convulsions themselves are the actual cause of the amaurosis to which we refer. The explosions or nerve storms may involve the visual cortical centres as well as the Rolandic motor centres, or the speech centre, and the period of discharge be followed by a period of exhaustion. The following cases will illustrate our meaning.

CASE 1.—The patient, aged three years, was admitted to the Manchester Children's Hospital on Dec. 19th, 1902. The history given by the mother was kindly supplemented by Dr. J. B. Cruickshank who attended the child during the acute attack. A paternal uncle had suffered from epilepsy and an infant brother had died in convulsions. The patient had suffered from convulsions a year before; he had also suffered from eczema. Two weeks before admission, when in apparent health and without any assigned cause, he was seized with severe general convulsions which lasted four or five hours. There was drowsiness for several days after the convulsive state was over. The temperature during the "status eclampticus" rose to 103·5° F.; the pupils were at first pin-head in size but later were dilated and sluggish. Examination of the eyes by Dr. Cruickshank showed no optic neuritis or any coarse changes; there was no albumin in the urine. One of the first things the child said when coming round was, "Mummy, draw the blind up," and his repeating this request several times called the attention of the friends to the fact that he could not see (it is interesting to note that the child had clearly pictured memory-image of the window with the blind up and also the state of darkness when the blind was down). There was some paresis of the left arm. On admission it was noted that there was no paresis; the knee-jerks and plantar reflexes were normal, the boy seemed to be completely blind, but the pupils were of the normal size and reacted to light. The pupils contracted well when light was thrown on them with an ophthalmoscopic mirror but the child did not seem to notice the light. They dilated well with atropine. The fundi were normal. His hearing was abnormally acute: he would sit up in bed playing with toy animals which he recognised by touch and chatting to the other children when he heard their voices. He would sing nursery rhymes while playing on a toy piano but often missed the keys as he could not see them. About ten days after admission, when the ward was lighted up at night, he repeated for the first time, "Light, light," and about the same time he was conscious of the light of the taper when brought near his face and when asked to blow it out he tried to do this but usually in the wrong direction. He could recognise a watch if placed in his hands by putting it to his ear but he could not see it. By Jan. 16th it was evident that his sight was returning and he could recognise objects such as books or a watch a couple of yards off. After this there was a rapid improvement and by the 29th he could recognise toys on the other side of the ward and pick up beads and pins. He was clumsy for a while on his legs and he ran against things and knocked his head against chairs for some time after it was certain that he could see. Recovery appeared to take place in both eyes slowly and equally and we could obtain no evidence of hemianopia or that central sight returned before peripheral, but the fact that he knocked his head against the ward furniture when running about was suggestive of his peripheral vision being less acute than the central.

CASE 2.—A boy, aged seven months, was first seen on Dec. 1st, 1897, at the North-Eastern Hospital for Children. He had been wasting for a fortnight, with occasional vomiting and constipated bowels. He had been brought up on the breast and when examined had four teeth. On Jan. 26th, 1898, since the last visit he had had "congestion of the lungs," followed by fits lasting for a fortnight. The child was found to be blind after the fits. There was now weakness of the right arm and leg. There was no optic neuritis and there were no coarse changes in the fundus of the eye. The pupils were equal and active. There was no family history of fits or of lunacy or of epilepsy. On Feb. 23rd the child still appeared to be blind. On March 9th some vomiting still occurred from time to time. The eyes did not follow a light. The pupils were active. There was no rigidity of the right arm and leg, both of which he was able to move slightly. On May 11th the mother was certain that the child was blind. There were slight rigidity of the right arm and weakness of the right leg. The knee-jerk on the right side was exaggerated. The optic discs were thought to be slightly white but the ophthalmoscopic examination was difficult and incomplete It appeared that the child had several fits a week or so before and the last fit was followed by a period of apparent unconsciousness. On

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[3] THE LANCET, Jan. 9th, 1892, p. 79.

[1] A paper read before the Society for the Study of Disease in Children on March 20th, 1903.

[2] Fleeting Amaurosis in Infants. By Sydney Stephenson, M.B., C.M., Reports of the Society for the Study of Disease in Children, 1902.

June 15th the child moved all his limbs freely and no rigidity could be made out The knee jerks were exaggerated The eyes followed movements of the ophthalmoscopic mirror On Sept 7th the mother stated that about a month previously she noticed that the child looked at things and she was of opinion that he could now see with his right but not with his left eye On Feb 25th, 1903, when the child was nearly *six years of age, the mother stated that the sight had slowly* improved until it became quite good The right arm and leg also recovered He was unable to walk until six months before but now got about nicely by himself The sight was good, the knee jerks wer

good The limbs were o

CASE 3 —A boy, aged

sions about two months before he came under notice and they were followed by a period of unconsciousness which lasted for four days There was intercurrent vomiting Upon recovery he was found to be blind and his right arm and leg "hung as if paralysed ' The sight was stated slowly to have improved, so that when he was seen it was impossible to satisfy oneself that there was any departure from the normal in that respect The pupils were equal and active, the fundi showed no morbid changes The right arm and leg, however, were distinctly weaker and colder than those of the opposite side

CASE 4 —A girl, aged 14 months, had suffered from a cerebral attack some four weeks before she came under notice This was marked by convulsions, vomiting, semi-consciousness, screaming fits, and incontinence of urine and fæces The symptoms persisted for four or five days and then gradually passed away when it was found that the child was perfectly blind The right leg was also weak When *the child was seen she did not follow the flash of the* ophthalmoscopic mirror at all *readily and the vision* of the right was thought to be worse than that of the left eye Her sight, by the way, was stated to be improving The pupils and fundi (examined under chloroform) were normal The case then passed from under observation

CASE 5 —A boy, aged five years, was admitted to the Manchester Children's Hospital on Oct 2nd, 1902, with "infantile hemiplegia" The mother stated that when 18 months old he had a severe attack of whooping cough followed by convulsions He was convulsed for four hours, this was followed by stupor for some days It was then noted that his right arm and leg were paralysed and also the right side of his face He was blind and could not speak His sight gradually returned in the course of a week or two but he did not speak for a month He had a well marked spastic hemiplegia and slight facial paralysis His intelligence was fairly good

Remarks —Nettleship[3] has reported two cases similar to the above and Gay[4] reports four more Both authors, however, relate other cases of amaurosis which are clearly not on all fours with ours If we analyse these 11 cases which include our own and those of the above named authors we find as far as age is concerned that two were between six weeks and two months, two between seven months and eight months, four from 13 months to 18 months, and three from two and a half months to three years In two cases the convulsions occurred during whooping cough and one followed "congestion of the lungs", in eight cases no cause could be assigned In one case the convulsions were only slight, in the rest the attacks were evidently severe, the "status eclampticus" lasting for some hours and unconsciousness or stupor for some days In one case, aged two months the convulsions and stupor lasted for two weeks, the amaurosis which followed was still present when seen at 17 months of age, and there was apparently some optic atrophy as the ' discs were of a light tan shade ' In four of the cases there was no accompanying paralysis In seven (or 63 per cent) there was more or less paralysis, in one of these the paresis of the left arm disappeared in a week or two In four there was a well marked right hemiplegia which lasted for some months and in some of the cases the paralysis seemed likely to be permanent In one case there was a left hemiplegia and in another weakness of the legs The fundi were normal in all but two, one was whiter than normal and in the other the discs were of a light tan shade In all except one there was recovery of sight, in the exceptional case blindness seemed likely to be permanent For the most part the pupils were observed to be normal and active, in others sluggish In one case there was temporary aphasia. In only one have we a note of the urine (Case 1), in this case there was no albuminuria

What were the nature and cause of the convulsive attacks? The history in nearly all of the cases records that the fits were frequent and accompanied by coma or stupor which lasted some hours or days This condition of coma appeared so serious in some instances that death appeared to be imminent In two cases whooping cough seems to have been the exciting cause, in another ' congestion of the lungs," while in other cases no cause could be assigned It is possible that the toxin of pneumonia or influenza may have been the immediate cause in some of the cases, or less likely the convulsions were uræmic This condition of "status eclampticus' which occurs in infants and young children is in some ways remarkable and no doubt does duty on occasion for "brain fever" or "meningitis' from which recovery takes place The post mortem findings in such cases, according to our experience, are disappointing, nothing but a wet brain with venous congestion being found—at least, to the naked eye Probably this condition is much oftener due to reflex irritation rather than to central lesions In those cases which are associated with a hemiplegia which becomes permanent there can be but little doubt that there is a grave organic lesion, such as a thrombosis or hæmorrhage involving part of the Rolandic area or its "hinterland," but whether the lesion is the cause or consequence of the convulsions in any given case must at present be left an open question The stage of coma which is so often prolonged for some time after the convulsions have *ceased may be the result of exhaustion or of the toxin poisoning* and when *consciousness returns the visual centres* are left in an anæsthetic state or the motor speech centre or other motor centres may be left in a temporarily exhausted condition

There is some evidence to show that the visual cortical centres are involved in the epileptic attacks of adults It is well known that visual aura are not uncommon Gowers[5] records that "loss of sight preceded loss of consciousness in 26 cases out of 1000 cases collected by him In one case the loss of sight in minor attacks lasted for an hour and was followed by an hour's sleep ' Gowers concludes that "the phenomena of these aura suggest that there may be both a discharge and an inhibition of the same centre For instance a patient always first saw a flash of light, then sight was lost, and then consciousness " Auditory warnings as well as visual appear to occur in the epileptic attacks of adults, though perhaps not so frequently We are not aware of any loss of hearing following on the fits of infants or children In the night terrors as well as in the rarer "day terrors' of children, conditions which are allied to epilepsy, the frights are occasioned by the involuntary recall of visual memory images, the child sees pursuing wild beasts, rats, or other horrors, but does not appear to hear any sounds Transient hemianopia or at any rate partial blindness, is apt to occur in association with migraine in neurotic subjects A neurotic girl under our observation, who often has severe headaches, frequently complains in these attacks that she cannot see anything situated in the right half of the field of vision In looking at the word "Monday," for instance, she sees "Mon" but not 'day" W Harris[6] has recorded some cases of hemianopia following unilateral convulsions in adults with general paralysis and also following the attacks of migraine He says that "in many cases an epileptic discharge may originate in or near the half vision centre on one side, in some cases proceeding no further beyond producing temporary hemianopia, and in others producing a typical epileptic fit, and again in others giving rise to unilateral convulsions without loss of consciousness ' Dr F J Batten tells us that he has also seen a temporary hemianopia follow an epileptic or convulsive attack in a child

A transient aphasia may also occur in association with a temporary amaurosis following convulsions, as in Case 5 In another case coming under our notice an aphasia which lasted two months followed a convulsive attack but was not associated with any blindness A boy, aged two and a half years, suffering *from whooping cough* was *seized with* convulsions which lasted four hours and when consciousness returned it was found that he could not speak. When seen shortly after he appeared quite well and understood what was said to him, but refused to say a word. He pushed his plate at dinner-time when he wanted more. Two months later he began to say a few words and then quickly became as big a chatterbox as ever. We have already noted the occurrence of a temporary paresis of hemiplegic distribution which is found not infrequently after convulsions, recovery taking place in the course of a few days or weeks. This also follows epileptic attacks as is well known. In infantile convulsions from reflex excitation the spasms are often one-sided or at least more marked on one side than the other and the side which has suffered most is apt to be weak for a while.

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[3] Recovery from Amaurosis in Young Infants by E Nettleship F R C S Eng Transactions of the Ophthalmological Society, vol xiv 1894

[4] Acute Cerebral Amaurosis of Infancy by W Gay M D, Royal London Ophthalmic Reports vol xiii, 1893

[5] Epilepsy and other Convulsive Diseases by W R Gowers M D F R S

[6] Hemianopia with special reference to its transient varieties by W Harris M D Brain vol 20 1897

In conclusion we would venture to suggest: 1. That there is a form of amaurosis which occurs in infants or young children which is post-eclamptic, due to anæsthesia of the visual centres. 2. That the convulsions, which may be due to various causes, are apt to be severe and accompanied by coma. 3. That the amaurosis may be associated with aphasia and paresis of hemiplegic distribution; the hemiplegia may be permanent. 4. That the amaurosis is for the most part transient. It is possible that in some instances there is hemianopia.

FOREIGN BODY IN ONE OF THE MAIN DIVISIONS OF THE LEFT BRONCHUS;

ATTEMPTED REMOVAL BY POSTERIOR BRONCHOTOMY THROUGH THE PLEURAL CAVITY.[1]

BY J. GRANT ANDREW, M.B., C.M., F.F.P.S. GLASG.,
ASSISTANT SURGEON TO THE VICTORIA INFIRMARY, GLASGOW.

THE patient, a boy, aged 15 years, was admitted to the Victoria Infirmary, Glasgow, under the care of Mr. A. E. Maylard, on the evening of Dec. 24th, 1902, as an urgent case. He had been amusing himself in bed before going to sleep with a toy squeaker similar to what is placed in india-rubber dolls, when forgetting to remove the whistle from his mouth he fell asleep. He was not long asleep before he was suddenly awakened by a sense of suffocation, for the whistle had entered his windpipe. No amount of coughing and slapping on the back had any effect in dislodging the body and he was hurriedly taken to the infirmary. On his admission it was at once evident that the whistle was lodged somewhere in the windpipe and was probably lying straight across, for with every respiration there was a short shrill inspiratory whistle, followed by a longer expiratory squeak similar to what is got in squeezing a rubber doll but more muffled. The whistle was described as round in shape, with a hole in the centre, a serrated and a smooth edge, and of about the size of a threepenny-piece. Beyond an occasional fit of coughing its presence caused him little discomfort. The house surgeon, Dr. John Paton, examined his larynx with the laryngoscope. He found the cords patent but could not see the squeaker. On the following morning, the 25th, the whistling with respiration was still audible. The larynx was the only part tender to touch and nothing could be felt externally. The respiratory murmur was less marked all over the left lung, and more air seemed to be entering the right than the left lung. Dr. D. O. Macgregor, the superintendent, examined him with the screen but could not then locate the whereabouts of the squeaker. Under an anæsthetic the trachea was opened and Mr. Maylard made an examination of the windpipe and bronchi with long probe and forceps, but with a negative result. He could not be certain that he touched the foreign body at all and he raised the question whether it had not been expelled, perhaps coughed up and swallowed. A tracheotomy tube was inserted. For the next day or two there was little to note except that since the trachea was opened the whistling had ceased, that comparative dulness was now present all over the left lung and more particularly at the base, that the respiratory murmur was lessening and accompanied by moist crepitant râles, and that the pulse, respiration, and temperature were gradually rising. On the 29th his condition assumed a more serious aspect. The expectoration, of a muco-purulent character, was beginning to smell badly, the cough was very troublesome, and the patient's appearance was such as to suggest septic poisoning. The possibility of a commencing gangrene of the lung was considered. Another skiagraph taken by Dr. Macgregor showed the squeaker to be at a point between the fifth and sixth ribs on the left side and three-quarters of an inch outside the left border of the sternum. Mr. Maylard having to go out of town the case came under my care. Before leaving Mr. Maylard mentioned to me that he thought the boy's condition was very serious and that I had his sanction, to do what I thought best. As no improvement was taking place, and now knowing the exact position of the squeaker, I determined to try its extraction. Enlarging the tracheotomy wound I passed a long probe into the bronchus and was quite confident that I felt the squeaker. With a long piece of silver wire bent like a hook I fished for a long time and thought more than once that I had caught it. Whether we were correct in supposing it to be too tightly held by the swollen mucous membrane or not I do not know, at any rate I failed to dislodge it. We then tried inversion, but with no effect. Regarding the outlook as very black if we left the squeaker where it was, perhaps unwarrantably so, I made an attempt to get at it from behind through the posterior mediastinum, removing two inches or so from the third, fourth, fifth, and sixth ribs between the base of the scapula and the vertebral column. On opening the pleural cavity, in which there was some fluid, it was at once seen that some air at least was entering the lung, for with every inspiration it was blown against the opening and with expiration sucked up into the upper third of the chest cavity. To fix the lung sufficiently to examine the root was the difficulty. We partly succeeded by inserting plugs of gauze, but every now and then a violent fit of coughing would supervene which did not facilitate matters. The structures forming the root of the lung could be fairly easily identified, though they seemed all clumped together, and it was only by the finger that one could recognise the more resistant wall of the bronchus By palpation of the bronchus and examination of one suspicious spot with a needle I satisfied myself that the squeaker was not in the main bronchus, but in all probability was in one of its branches and covered by lung tissue, though I did not feel it. We thought it wise at this point to proceed no further and accordingly partly closed the wound, using gauze as a drain.

For a week after the operation the discharge from the wound behind was serous; it then became semi-purulent and ultimately purulent, necessitating the insertion of a tube. The expectoration continued to be profuse, muco-purulent in character, and at first very fœtid. Some sloughy tissue was discharged from the posterior wound, but the amount of discharge, never abundant, gradually lessened. The expectoration diminished, the physical signs cleared up, the patient put on weight, and he was dismissed on March 11th with the wounds healed and in excellent health. The cicatrix behind is with every inspiration drawn slightly inwards; the movement of the scapula towards the vertebral column (the action of the rhomboidei) is less than on the sound side; other movements are free. Before dismissal Dr. Macgregor and myself examined him thoroughly with the "screen," but failed to find any trace of the squeaker. Skiagraphs were also taken but revealed no shadow of the whistle. Naturally the question arises, Where is the squeaker? That it was in the bronchus at the time of the operation is absolutely certain. The skiagraph was taken the night before the exploration and it is hardly possible to believe that it could have been coughed up without the knowledge of the boy, who was intelligent and aware of its presence in the lung, or of the special nurse in charge of the case. That it was not coughed up or discharged through the posterior wound subsequently to the operation I am equally certain; that it might have been coughed up, swallowed, and passed by the rectum is possible—the boy thinks not. For the first week only after the operation were the stools strained.

I bring this case forward, however, principally to raise the question as to the best method of approaching the bronchi. In considering this question it is necessary to start with the assumption that all other measures for extraction have failed and that the case is a desperate one necessitating an extreme measure. Nothing short of this would justify an operative procedure which is undoubtedly performed with great risk. I know that the greater proportion of cases of foreign bodies in the bronchi or lungs get well in time by expulsion, by encapsulation, or otherwise, but [illegible] cases which end fatally chiefl[illegible] In these extreme cases wh[illegible] commencing, or is actually [illegible] body revealed by radiography is in an accessible position—I mean the main bronchus or one of its branches—surely some effort should be made in these cases to extract the body even though it entails an operation such as that attempted in the present case. In the February number of the *Annals of Surgery* for this year there is a very interesting editorial article on "Intramediastinal Bronchotomy and Œsophagotomy," by one of the editors, Lewis Pilcher of Brooklyn. The whole work done in this particular field is reviewed and reference is made to most of the published cases. The method of approaching the bronchus through the anterior mediastinum is first considered and details are given of Ricard's[3] case and of Milton's[4] case. In both of these cases the foreign body was the same, the inner cannula of a tracheotomy tube, and in both the cannula was in the right bronchus. Ricard "resected the upper half of the sternum, uncovered the trachea near its bifurcation and palpated it repeatedly but could not feel the cannula either at the lower part of the trachea or at the beginning of the bronchus." Milton divided the sternum in the median line and drew the two halves apart by strong retractors. He had some difficulty to begin with in exposing the bifurcation of the trachea but succeeded by drawing the trachea upwards. The trachea was opened low down and the cannula was removed. The patient in Ricard's case died from gangrene of the lung and in Milton's from mediastinal sepsis. Pilcher concludes his remarks on the anterior operation thus: "These two cases illustrate well the possibilities, the difficulties, and the dangers of attacks upon the air passages through the anterior mediastinum. ...... The future successful mediastinal tracheotomy will in all probability combine the following steps: (*a*) the sternal resection of Ricard; (*b*) the exposure of the trachea by the pushing back of the pleura and the holding aside by retractors of the great retrosternal vessels; (*c*) the lifting up of the trachea by traction from above through a hook inserted into the old tracheal opening in the neck; (*d*) the incision into the trachea *just above its bifurcation*; (*e*) the exploration of the bronchi through the wound, the detection and the removal of the foreign body; (*f*) the tamponade of the anterior mediastinum, with the external wound left widely open to afford unrestricted exit of wound discharge; (*g*) later secondary suture or healing by granulation as the case may require." The method of approaching the bronchus through the posterior mediastinum is then referred to and the opinion of Quénu[4] quoted as to the best method of approach, based alone upon experiments upon the cadaver. Briefly, the method advised by Quénu is as follows: exposure of the ribs by flap, removal of portions of the third, fourth, fifth, and sixth ribs, and stripping the pleura from the chest wall so as to gain access to the bronchus without opening the pleural cavity. This method is "a further development of the observations made by Quénu and Hartmann[5] with regard to the possibility of exposing the œsophagus through this opening."

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[1] The case was shown at a meeting of the Pathological and Clinical Society, Glasgow, on April 20th, 1903.

Two unsuccessful cases by Rehn[6] and a successful case by Enderlen[7] are given of œsophagotomy by this route but no case of bronchotomy by this method is quoted nor can I find any record elsewhere. Pilcher concludes his article thus: "From this review of the published cases in which up to the year 1900 efforts had been made to reach the bronchi or œsophagus through the mediastinal spaces, anterior or posterior, there was little to encourage its further practice. Operative procedures which may be successfully carried out upon a cadaver are attended with the greatest of difficulty and danger in the living subject." As Willard,[8] who attempted bronchotomy on dogs, very pointedly remarks: "The aspects of the parts during life and after death are as absolutely different as they can possibly be. A bronchus which after death is easily exposed, and which is reached with the greatest ease, I have seen five minutes previously absolutely enclosed with huge pulsating vessels of twice the size, any one of which, if punctured, would seriously complicate, *if not render the operation absolutely fatal*. The alteration of the parts in life and in dea[illegible] Paget, [illegible] says: [illegible] of our reaching and removing foreign bodies in the bronchi by any direct incision of them. It is true that one might possibly gain access to a bronchus through the posterior mediastinum without opening the pleura, or, at all events, without causing collapse of the lung, but the dangers of hæmorrhage are so great and the uncertainty of the whole procedure so frightful that the operation is hardly ever likely to be practised. And how can the surgeon explore the bronchus or get a hold of the foreign body through a button-hole in the bronchus deep inside the chest? How can he close his incision even if he can make it? And how can he prevent infection of the mediastinum if he leaves it open? These objections may be theoretical, but so is the operation." I make this somewhat lengthy extract because many of the points raised by Mr. Paget bear on the present case and help us to come to a right conclusion as to whether the operation is really a justifiable one or not. There is no reported case, as far as I can find, of deliberate exposure in the living subject of either bronchus through the pleural cavity for the removal of a foreign body. The dangers and difficulties of this method of exposure are without doubt considerable and only the extreme gravity of the case, as before stated, would warrant such a procedure.

Pneumothorax.—The danger of sudden and alarming respiratory embarrassment, if not of actual death, from pneumothorax, or rather from collapse of the lung, has been regarded as sufficient to ban this route. That there was respiratory difficulty in the present case is true, but it was not alarmingly increased when the pleural cavity was opened and extensively opened. Perhaps this was partly due to the fact that the anæsthetist, Dr. D. Lamb, administered oxygen whenever he thought the breathing or colour of the patient demanded it; perhaps the youth of the patient had also something to do with it.

Movement of the lung.—The great difficulty in this case was the constant movement of the lung; it flopped about in the chest cavity like a sail in the wind with a loose sheet. Gauze packing steadied it sufficiently to palpate the bronchus, but, had we felt the foreign body in the bronchus, this movement of the lung would have greatly increased the difficulty of its extraction if it had not prevented its extraction altogether. To overcome this difficulty I believe that the safest and the most satisfactory course would be to remove a portion of another rib and insert one's hand into the pleural cavity. The root of the lung could then be palpated between the forefinger and thumb and the bronchus easily identified by its cartilaginous rings. Should the foreign body be detected this fixation of the root would enable the operator to incise the bronchus and to extract it. I do not think that this is such a[illegible] it would appear; as it was, I had [illegible] the chest cavity. It certainly wou[illegible] in fixing the root, greatly facilitate the examination of the bronchus, and greatly lessen, if not entirely remove, the possibility of injuring ei[illegible] vations of [illegible] The appro[illegible] the surgeon to deal with a gangrenous patch [illegible] incision or otherwise and even to remove the entire lung if necessary.

The conclusions which might be drawn from this case and a consideration of the subject in general are these: 1. A foreign body in the right bronchus not far below the bifurcation of the trachea, which of course defies extraction by other measures, is best got at through the anterior mediastinum, the technique as detailed by Pilcher. The exploration

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[illegible] de la Chirurgie du Médiastin [illegible] la Société de Chirurgie de Paris, [illegible]

[illegible] Body, from the Bronchus by [illegible] LANCET, Jan. 26th, 1901, p. 242.

[illegible]

[illegible] r Speiseröhre, Ver- [illegible] Chirurgie, 27 Kon- [illegible]

[illegible] eren Mediastinum, [illegible] l.

[illegible]

[illegible] rgery of the Chest, 1896, p. 361.

[illegible] Ibid.

of the left bronchus through the anterior mediastinum is anatomically impossible. 2. A foreign body in either bronchus well down near the lung can be reached, if other means fail and the nature of the case demands it, through the posterior mediastinum. With the arm hanging over the table a vertical incision midway between the base of the scapula and the vertebral column, and extending from the upper border of the third rib to the lower border of the seventh rib, should be made dividing everything right down to the ribs. A flap incision is a disadvantage as free drainage is advisable. The ribs, third to seventh inclusive, should be divided subperiosteally, and from two inches to two and a half inches removed from each. Median division of the pleura is an advantage as its reflection to each side protects the hand from the cut edge of the ribs. 3 By deliberately opening the pleural cavity and inserting one's hand the root of the lung could be easily manipulated, the bronchus incised, and a foreign body removed with greater certainty and certainly with less danger from hæmorrhage than by stripping the pleura from the chest wall. No attempt should be made to close the opening made in the bronchus. The danger of subsequent sepsis would be much lessened by only partially closing the wound and packing from the bottom.

Remarks by Mr. MAYLARD.—My comparatively short association with the case in its initial stages leaves me little to add to what has already been stated by Dr. Andrew. It had been my unfortunate experience to see two cases of death from gangrene of the lung due to the accidental lodgment of teeth within the bronchi; and the gravity of the symptoms which were beginning to show themselves in the case led me to agree with Dr. Andrew that we were fully justified in employing any measures that would reasonably be expected to lead to the extraction of the foreign body or favour its expulsion. Although the attempt to remove it failed it is not altogether improbable that the manipulation involved in the operation may have had something to do with the subsequent dislodgment. The operation was undertaken, as will be learned from Dr. Andrew's own statement, with the strictest appreciation of the gravity of the symptoms which apparently manifested themselves and the severity of the measure it was proposed to employ. Apart, however, from all considerations connected with the operation as employed for this particular case I am of opinion that it is not without its own teaching in regard to the method of approaching the root of the lung, the bronchi, and œsophagus by the posterior mediastinal route; and quite apart therefore from any intrinsic merits connected with the case itself the operation is one which from its great rarity is worthy of being recorded.

Glasgow.

A CASE OF HÆMATOSALPINX DUE TO TUBAL PREGNANCY COMPLICATED BY TORSION OF THE PEDICLE; OPERATION; RECOVERY.

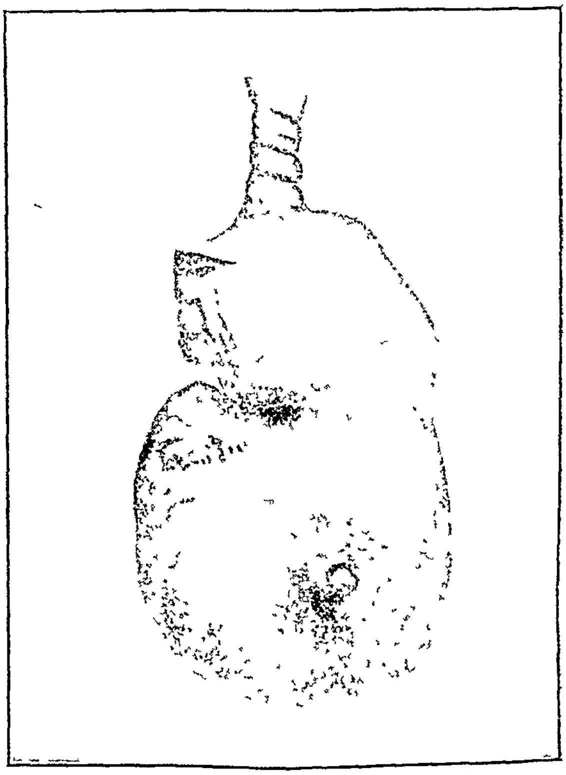
BY FREDERICK J. McCANN, M.D., C.M. EDIN.,
F.R.C.S. ENG., M.R.C.P. LOND.,
PHYSICIAN TO THE SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, MARYLEBONE-ROAD, N.W.

IN searching through the literature of hæmatosalpinx I have succeeded in finding only one recorded example where torsion of the pedicle complicated a hæmatosalpinx due to tubal fœtation. Martin[1] of Berlin describes a case and gives a drawing of the specimen. The patient, a woman, aged 28 years, had a left-sided ampullary tubal pregnancy at about the second month. The peritoneal cavity contained a large amount of sanious ascites. The tumour was bluish-black in appearance and had two twists in its pedicle. When removed it was found to consist of the left tube and ovary. It had a length of 13 centimetres and a breadth of six centimetres. The Fallopian tube was S-shaped and the ampullary end was dilated to the size of a goose's egg. No fœtus was found, but there was a placenta infiltrated with blood, and there were also blood, hæmatoidin crystals, and fatty detritus. The ovary was the seat of a large hæmatoma and the ovarian tissue was infiltrated with blood. This case presents certain points of resemblance to that recorded in this paper, for in both a fœtus was absent and the torsion of the pedicle was well marked.

In May, 1898, I was asked by my friend, Dr. D. T. Macleod of Sydenham, to see a patient, aged 34 years, who was then suffering from a purulent uterine discharge. Curetting was recommended and performed. No abnormal condition of the appendages was detected at this operation. As a result of the curetting her general health improved and this improvement was maintained. In October, 1900, she was suddenly seized one evening with very acute pain, said to be in the "kidney region," which extended round towards the costal margin in front. Rest and the application of heat for two or three hours relieved this attack. In March, 1901, this pain recurred and the same treatment was again successful. She did not consult a medical man until her third attack, which occurred in the following April. Dr. Macleod was then consulted and he has kindly furnished an account of this and a subsequent attack, which I shall give in his own words:—

> The patient was certainly suffering most acutely and I came to the conclusion that it was due to renal colic I gave a hypodermic of [illegible] and applied warmth. The pain subsided in six or eight hours. and the pain, which was felt well over did not give me any clue to its exact origin—indeed, intercostal neuralgia was even thought of.
>
> The next attack was the final and was accompanied by a rise of temperature (102° F.). It occurred on May 25th, 1901. The pain was distinctly abdominal, not pelvic, occupying the right lumbar region in front. It was most distressing in its acuteness and I felt certain that there was peritonitis (localised) from the general appearance of the patient and the condition of the pulse.

On May 27th Dr. Macleod detected on examination a swelling in the position of the right ovary which was very tender on pressure; and I saw the patient in consultation with him on June 11th. I had the advantage of anæsthesia during my examination. A smooth, rounded, slightly moveable swelling was felt occupying the right posterior quarter of the pelvis. As the patient had never been free from pain since the last attack abdominal section was recommended.



Tubal gestation with twisted pedicle. The figure represents the natural size of the tumour and shows the three twists in the pedicle.

On June 15th, assisted by Dr. Macleod, I opened the abdomen. The anæsthetic (ether) was administered by Mr. Rickard W. Lloyd. After the escape of some ascitic fluid a swelling on the right side of the uterus was exposed. It was bluish black in colour, but at certain points a greenish-yellow shade was noted. The intestines adhered to it. The adhesions were carefully separated and the tumour, with its pedicle, was exposed. Three turns were observed in the pedicle (*vide* illustration). A ligature was applied below the twist and the tumour was removed. The right ovary was not removed. The appendages on the opposite side were normal. The pelvic cavity was washed out with salt solution and the abdominal wall was closed. The patient convalesced rapidly and Dr. Macleod wrote to me that "recovery after operation was uninterrupted and the wound healed by first intention. She has remained absolutely well ever since. The menses are as usual."

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[1] Die Krankheiten der Eileiter, p. 348.

The illustration above represents the parts removed in their natural size. The dilated tube contained blood clot and dark fluid blood. The tubal wall was infiltrated with blood. Sections made from the wall showed chorionic villi also infiltrated with blood. The tube was closed at its fimbriated extremity. Mr. S. G. Shattock, who kindly examined the specimens, confirmed this opinion. The patient, who had been married for nine years, was sterile. Her menstruation was always regular.

Although the case narrated together with that described by Martin of Berlin are the only two examples of torsion of a hæmatosalpinx due to tubal fœtation which I have been able to find, still such torsion has been described where the hæmatosalpinx was due to other causes. Mr. J. Bland-Sutton[2] describes and figures a specimen of hydrosalpinx with axial rotation. This specimen, which is now preserved in the museum of the Royal College of Surgeons of England, was removed by Mr. Henry Morris. The Fallopian tube between the cyst and the uterus was tightly twisted three and a half times. The tumour was "strongly adherent." The contents were fluid and of a chocolate colour. Here was an example of hæmorrhage from the tubal wall due to torsion of the pedicle rendering the contents chocolate-coloured. This, as is well known, is what occurs when a similar change (torsion) occurs in the pedicle of an ovarian cyst. Hartman and Delbet[3] have also recorded examples of axial rotation of distended tubes. More recently at the Gynæcological Congress held in Vienna von Herff[4] demonstrated a specimen of hæmatosalpinx with twisted pedicle and Kleinhaus[5] has also described and figured a specimen.

No doubt the publication of this case may be the means of bringing forth other cases but at the present time it may be said that torsion of the pedicle is one of the rare complications of hæmatosalpinx due to tubal pregnancy.

Curzon-street, W.

A NOTE ON THE SERUM REACTION OF TUBERCLE,

WITH SPECIAL REFERENCE TO THE INTIMATE NATURE OF AGGLUTINATION REACTIONS GENERALLY AND TO THE THERAPEUTIC INOCULATION OF THE NEW TUBERCULIN.[1]

By A. E. WRIGHT, M.D. DUB.,
PATHOLOGIST TO ST. MARY'S HOSPITAL; LATE PROFESSOR OF PATHOLOGY, ARMY MEDICAL SCHOOL, NETLEY.

Technique of the serum reaction.—The difficulties which have stood in the way of the general exploitation of the serum-sedimentation reaction in connexion with tubercle have been technical difficulties associated with the fact that cultures of the tubercle bacillus do not yield uniformly turbid suspensions such as are required for the institution of a sedimentation reaction. Arloing and Courmont showed a way out of this difficulty. They showed that it is possible by a process of careful selection and by frequent agitation of the growing cultures of selected strains of the tubercle bacillus to obtain a uniform bacterial suspension for the purposes of serum sedimentation. Koch introduced an improved technique, the essential feature of which is the grinding up of the tubercle bacilli after previous sterilisation of the cultures under alcohol. The tubercle powder employed—I speak of a specimen kindly placed at my disposal by Professor Dönitz of Berlin—appears under the microscope as an irregular detritus possessing the typical staining reaction of tubercle and containing interspersed here and there an intact bacillus. This powder is employed in the preparation of the test fluid. As much of the powder as will lie on the point of a very small knife blade is taken, is introduced into an agate mortar, and is then triturated with normal salt solution—the solution being supplied drop by drop until about one cubic centimetre has been added. The suspension thus obtained is centrifugalised in a hand centrifuge until the grosser particles have sunk to the bottom, leaving above a clear opalescent fluid. This is the test fluid. When there is mixed and digested for 24 hours with this test fluid a serum which gives the characteristic tuberculous reaction there is thrown down in the fluid a floccular precipitate which aggregates itself into a pellet at the bottom of the containing vessel. The operations of making graduated dilutions of the serum and of mixing with these the test fluid are conveniently undertaken in capillary sedimentation tubes. The technique to be employed is at all points the same as that which I have described in connexion with the typhoid fever and Malta fever reactions.

Question of the intimate nature of the serum reaction.—It will be manifest on consideration that the test fluid which is employed owes its characteristic opalescence to the suspension—probably in a state of semi-solution—in the fluid of a multitude of infinitely fine particles. The essential features of the reaction are possibly in the first instance a process of precipitation, and certainly an agglutination of the finely divided particles, followed by a sedimentation of the flocculated masses. Many convergent lines of work seem to indicate that reactions of this kind play a very large part in the economy of nature and that they are the result of forces derived from the presence of salts in solution. The work of Hardy[2] and Whetham,[3] following upon that of Linder and Picton,[4] showed that the formation of jellies and the coagulation and precipitation of albuminous substances are brought about by forces of this kind. The latter author in particular showed that the forces exerted are progressively more powerful according as the salts in solution are the salts of monads, diads, or triads. Following upon, though not brought into relationship with, the work of Hardy and Whetham came the work of Bordet.[5] This author showed that the bacterial agglomerations formed under the influence of an agglutinating serum are (*a*) resolved into their component elements when these agglomerated masses are transferred to distilled water and (*b*) re-agglutinated by the addition of salt to the water. Lastly, Joly,[6] working in connexion with the problem of the formation of sedimentary rocks and the deposition of silt where river water falls into the sea, has shown that more rapid agglutination and sedimentation of inorganic particles (finely powdered slate) are determined by the presence of salts, in particular by salts of diad and triad elements. It may be noted in this connexion that the clarification of muddy water by alum depends on a practical exploitation of the agglutinating forces derived from a salt of the trivalent element aluminium. These forces are inferred to be electrical forces. The interpretation is justified by the generalisation that electrical forces are generated in watery solutions by the breaking up of the dissolved salts into ions, carrying single, double, or treble charges of positive or negative electricity, according as the ions are monovalent, divalent, or trivalent. The competence of such forces to produce the movements of transposition which are associated with agglutination is established by observations which show that a *solid body suspended in a fluid may be driven out or, as the case may be, drawn in, between electrodes*, according as it offers greater or less resistance to the passage of electricity than the enveloping fluid. A series of simple diagrams—diagrams, let it be remarked, which I owe to suggestions gathered from my friend Professor J. Joly—will serve to bring more clearly before the mind's eye the possible mode of action of [illegible]

In Fig. 1 [illegible] respectively [illegible] vening between these we have a fluid across which the current is conveyed. The lines of force are represented in the diagram by straight lines. In Fig. 2 we have the same two electrodes and the same fluid. But intervening between these we have now a solid object offering to the passage of the current neither more nor less resistance than the fluid medium. The lines of force will in consequence here be exactly as in Fig. 1. In Fig. 3 we have, again, the same two electrodes and the same fluid. But in this case the intervening solid body offers greater resistance to the passage of the electric current. As a result the lines of force will be deflected in the manner shown in the diagram and will exert as they pass round the obstacle a force which will tend to drive the solid body outwards from between the electrodes in the direction indicated by the arrow.

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[2] Surgical [illegible], p. 221.

[3] [illegible]

[1] A communication read before the Pathological Society of London on April 21st, 1903.

[2] Proceedings of the Royal Society, vol. lxvi.

[3] Philosophical Magazine, 1899.

[4] Chemical Society's Journal, 1895.

[5] Annales de l'Institut Pasteur.

[6] Congrès Géologique International, 1900, Proceedings of the Royal Dublin Society, vol. ix. (new series).

FIG. 1.

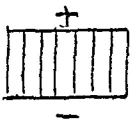


FIG. 2.

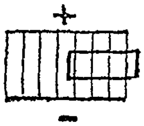
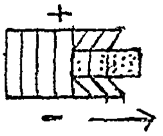
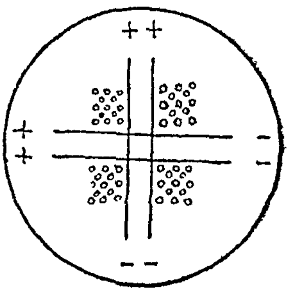


FIG. 3.



Carrying on the mental image and applying it to the case where electric forces are generated by the ionisation of salts in a fluid we may represent to ourselves the conditions which would obtain in such a medium by some such scheme as that exhibited in Fig. 4. We have here represented by the symbols + and – respectively electric charges carried by Na and Cl ions derived from common salt dissolved in water. Traversing the fluid intervening between these ions are lines of force which would be capable of pushing aside light particles. The displaced particles would, as indicated in the diagram, tend to find a position of rest in the angles between the intersecting lines of force. We may speak of the theory here in question as the "electrotaxis" theory. As set forth above it is, as consideration will show, capable of application in every case where particles offering appreciable resistance to the passage of electric currents are suspended in a salt solution Its application to the case of the serum reaction has not yet emerged. Such a relation, however, emerges if we make the hypothesis that the chemical combination which is known to occur between the agglutinin in the serum and the agglutinable constituent of the bacterial protoplasm is a combination of such a nature as to alter the relation between the conducting power of the suspended particles and the fluid in which they are suspended. We may in fact form a mental picture of the phenomena involved in the serum reaction if we suppose that under the influence of the chemical combination of the agglutinin of the serum with the agglutinable element in the suspended particle the conditions represented in Figs. 3 and 4 are substituted for the condition represented in Fig 2.

FIG. 4.



I would point out that this theory—though it is a theory which I have up to the present been unable to confirm by experiment—may yet be of interest in furnishing a possible explanation of specific serum reactions, and at the same time of the fallacies which are incident to all such reactions and in particular to the serum reaction of tubercle. The theory manifestly indicates that agglutination and sedimentation. since these may be brought about by the agency of salts alone in the case where the suspended particles offer greater resistance to the electric current than the enveloping fluid, are not *per se* of diagnostic value. The physical manifestations here in question are of diagnostic value only when we can infer from their non-occurrence in a control specimen, and from their occurrence in a specimen which has received an addition of serum, that this serum contains a substance which combines with, and induces a physical change in, the bacterial elements in question.

Practical importance of the serum reaction of tubercle.—As in the case of typhoid fever and Malta fever so in the case of tuberculous disease we can if we please exploit for diagnostic uses the elaboration of specific agglutinins in the organism. But we make in any case an unintelligent use of a specific agglutination reaction if we leave out of sight the fact that the presence of agglutinins in the serum is an indication not only of the nature of the bacterial infection but also to some extent an indication of the amount of immunising response which the bacterial invasion has evoked in the system. In particular it is important to note in connexion with the negative result of a serum reaction that it may indicate (*a*) the absence of the particular bacterial invasion which we suspect, (*b*) the purely localised nature of that invasion, and (*c*) the absence of a power of immunising response on the part of the invaded organism. Approaching the consideration of the tuberculous serum reaction from this point of view and bearing in mind in particular the fact that tuberculous infections are for the most part purely localised infections we have little reason to expect to derive much assistance in the diagnosis of tubercle from the indications of the serum-sedimentation reaction. In point of fact, in contrast with what is the case in septicæmic diseases such as typhoid and Malta fever, very little diagnostic importance attaches to the negative result of a serum-sedimentation test in the case of tubercle. Important, on the other hand, in connexion with the serum-sedimentation reaction is the fact that it gives in the case where the patient is being subjected to therapeutic inoculations of tubercle vaccine some indication of the extent to which anti-bacterial substances are being elaborated in the organism. This question may appropriately be introduced by glancing back over the history of Koch's anti-tuberculous inoculations.

Tuberculin inoculations as originally employed and new character with which these have now been tacitly invested.—The method of anti-tuberculous inoculation as originally introduced by Koch was in intention a method of toxi-therapeutics—i.e., a method designed to compass a therapeutic advantage by the agency of degenerative changes produced by the inoculation of toxins. The tubercle toxins were supplied in the form of the original tuberculin, essentially a filtrate from a tubercle culture. The therapeutic object sought was the extrusion and destruction of the invading tubercle bacilli. This goal was to be achieved by the agency of necrotic, degenerative, and inflammatory changes produced by the inoculated toxins in the foci of infection. This method of treatment is now universally recognised to have been wrong in principle. It is not necessary to say anything about its results except that the degeneration and inflammatory change which were produced, as was anticipated, in the foci of infection led more often to a spread of the bacteria than to their extrusion from the system. Of recent years, though the radical change of policy involved has been somewhat glossed over, the anti-tuberculous inoculations have undergone fundamental modification. They have now been divested of their toxi-therapeutical character and have been invested with the character of therapeutical inoculations undertaken with a tubercle vaccine. Hand in hand with this the constitution of the tuberculin has been modified in such a way as to bring it into line with other bacterial vaccines. In the form of the new tuberculin it now contains vaccinating elements derived from the protoplasm of the tubercle bacillus. It is in connexion with these therapeutic inoculations that the tuberculous serum reaction promises, as already indicated above, to be of use. In default of a better method it may serve us for the determination of the patient's capacity of response to the inoculation of tubercle vaccine, and for the proper regulation and interspacing of the successive doses.

I have already elsewhere[7] called attention to the proper regulation and interspacing of the doses in the case of the inoculation of a bacterial vaccine. I may, in view of the fundamental importance of the question, be allowed to recur to it in connexion with the question of tuberculin inoculations where it has a very special importance in consequence of the untoward result which might follow on a reduction of the resisting power of the organism to the tubercle bacillus. The question is capable of being compressed into a nutshell and the subjoined diagrams will serve to bring the issue clearly before the mind's eye. In Fig. 5*a* we have represented in the form of a curve the sequence of events after the inoculation of any bacterial vaccine At *a* we have represented in the form of a straight line the resisting power of the patient anterior to inoculation. Such a base line would represent in the case of an anti-typhoid inoculation the bactericidal power of the patient's blood anterior to inoculation and in the case of an anti staphylococcus inoculation the phagocytic power of the blood as measured by Leishman's method; *in the case of an anti tuberculous inoculation*, such as is here in question, the agglutinating power exerted by the blood on the test fluid which is here in question. At *b* we have represented in the form of the descending limb of the curve a decline in the resisting power of the organism *such as follows*, as I have endeavoured to *show, upon every* inoculation process. I have spoken of this as the "negative phase." At *c* we have the ascending limb in the curve, representing an increased resistance to infection. I have spoken of this as the "positive phase" At *d* we have the final result of a successful inoculation —a higher base line of resistance. In Fig 5*b* we have represented the event of two successive inoculations undertaken with appropriate doses of vaccine and appropriately interspaced. It will be seen that here the negative phase of the second inoculation in the figure comes on the top of the positive phase of the first inoculation, with the result that there is no such sinking away of the resistance below the original base line as occurred after the first inoculation. Let it be noted further that the effect of the two successive inoculations here undertaken is cumulative, and it is cumulative, as we desire it to be, in the direction of the positive phase and of increased resistance to bacterial invasion In Fig. 5*c*, on the other hand, we have represented the event of two successive inoculations inappropriately interspaced. It will be seen that the second inoculation here falls upon the negative phase of the first inoculation, with the result that the resistance of the organism, already reduced by the first inoculation, is still further reduced. I have shown elsewhere that when an undue tax is placed—

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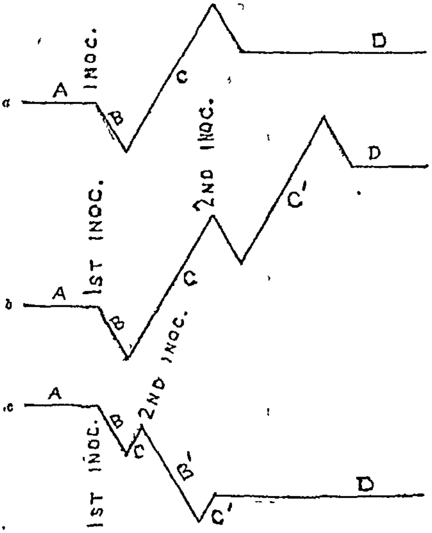
[7] THE LANCET, Sept. 14th, 1901, p. 715, and March 29th, 1902, p. 874.

FIG. 5.



The application of these general principles in connexion with the therapeutic inoculation of Koch's new tuberculin appears to me to be important. It would seem to me that—as is now, I understand, done in Professor Koch's clinic —every patient who is submitted to anti-tuberculous inoculation with the new tuberculin ought to be regularly tested by the serum test to ascertain that he responds to each successive inoculation. When such a system of tests is instituted we may hope to be successful in dealing with localised tuberculous infection by achieving a cumulative positive phase and in maintaining a higher base line of resistance. When *the tests are omitted we may chance to achieve by our* inoculations only a cumulative negative phase.

Lower Seymour-street, W.

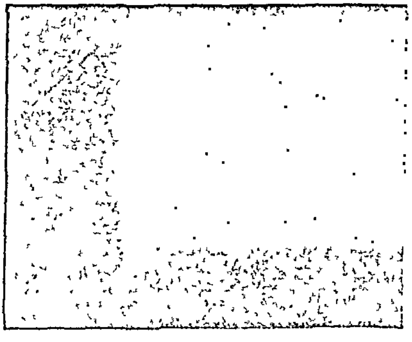
A NOTE ON THE POSITION OF THE HEART IN SOME CASES OF AORTIC ANEURYSM.

BY HUGH WALSHAM, M.D. CANTAB., F.R.C.P. LOND.,
ASSISTANT PHYSICIAN (FORMERLY PATHOLOGIST) TO THE CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA PARK.

IT would have been expected *a priori* that aneurysms springing from the arch of the aorta, especially when of large size, would cause considerable displacement of the heart downwards. This is found to be the case and has been insisted upon by most writers on the subject This low position of the heart gives rise to well-marked epigastric pulsation. It is not, however, so much the displacement of the heart downwards as a whole that is important in the diagnosis of aortic aneurysm as the transverse position which the organ takes up in many cases of this disease Indeed, *the heart as seen with the fluorescent screen occupies nearly* a transverse position in the chest in many cases of aneurysm of the aortic arch. This position of the organ tends to raise rather than to lower the apex unless there be considerable hypertrophy of the left ventricle, which is quite the exception in aortic aneurysm. No doubt the heart is pushed into this transverse position by the supra-incumbent weight of the aneurysmal sac I do not think that sufficient stress has been laid on this horizontal position of the heart as a sign of aortic aneurysm. In the absence of other physical signs of aneurysm of the aorta this transverse position of the heart becomes, I think, of great diagnostic value, as the following two cases well illustrate

CASE 1.—A man, aged 56 years, came to the out-patient room of the City of London Hospital for Diseases of the Chest on Jan 19th, 1901, with the following history. He had been in good health up to three months before when he began to suffer with dyspnœa on exertion. He also complained of pain in the back between the shoulders He had never had rheumatism and he denied syphilis. On examination he was found to have well-marked signs of aortic regurgitation. But what especially arrested attention was the fact that although the *heart's impulse was displaced outwards* it was not displaced downwards as we should have expected

FIG. 1.



Aneurysm of aorta with transverse position of the heart.

libitum. In the afternoon he became acutely ill and complained of severe pain in the epigastric and umbilical regions. At the same time he vomited a large amount of bile-stained fluid and assumed the decubitus of acute peritonitis. Dr. Stewart's attention having been drawn to a swelling which had been observed suddenly to develop in the area corresponding to the pain, this was examined and percussion was decidedly tympanitic, but this was only obtainable below as far as the midpoint between the umbilicus and the pubes. Above, Traube's space was considerably increased in area. Movements corresponding to peristaltic waves were visible on inspection and splashing sounds could also be easily elicited by the usual method. The pain at this time was extreme and it was with difficulty that the patient could be touched Owing to his unfavourable reaction to the suppository morphia was contra indicated. Stimulants and frequent injections of strychnine ($\frac{1}{30}$th of a grain) were relied upon, as the heart's action was by this time very much embarrassed. A turpentine enema was also ordered, which brought only temporary relief. The frequent passage of a Jacques catheter was necessary owing to the retention of urine which was secreted in fair amount. The abdomen was still increasing enormously in size, this being most marked in the antero-posterior diameter, and within a short time it was extremely tense. Notwithstanding every means adopted to relieve his condition the patient gradually sank and died in great agony on the 5th.

Necropsy.—At the post-mortem examination, which was held next morning, the stomach was found to be empty and very dilated. Its capacity was 10½ pints. The walls were extremely thin and pale. There was no evidence of stenosis or stricture anywhere. The first part of the duodenum also seemed to be dilated. The heart was fatty with hypertrophy of the left ventricle, while the right side was dilated and filled with dark thrombi. The kidneys were cirrhotic and cystic. There was a large amount of fatty infiltration throughout the body generally. The bladder was flaccid and much dilated. On dissecting the peritoneum from the recto-vesical pouch no trace of deep-seated suppuration could be found and the wound had almost healed. All the other organs looked healthy.

Remarks by Dr. STEWART.—The comparative rarity in medical literature of recorded cases of acute dilatation of the stomach may perhaps be sufficient justification for bringing the details of the above case under the notice of the readers of THE LANCET. From the foregoing account it would appear that the theory of ordinary septic absorption as a cause of the condition will not easily lend itself as an explanation here. Nor is it reasonable to think, as a factor in its causation, of any toxic effect produced by the anæsthetic at the time of operation The condition, however, of "cryptogenetic septicæmia" described by Leube, where no macroscopic appearances could be traced during life or after death, must not be forgotten in elucidation of certain doubtful cases The simultaneous loss of function in the involuntary musculatures of the stomach and bladder would seem to be due to a paresis either from pathological change or functional incompetence in the sympathetic system. After carefully reviewing all the clinical facts I am led to the belief that the case is a similar one to those few cases described by Fagge as "acute paralytic distension" and I think that it should be relegated to this category. It follows, then, that the association with operation may be looked upon purely as an accidental coincidence. For permission to publish the case I am indebted to Dr. F. Pritchard Davies, the superintendent of the asylum.

AT a meeting of the Northern and Midland Division of the Medico-Psychological Association, held at Cheddleton Asylum, Leek, on April 30th, Dr. Menzies being in the chair, Dr. E F. Trevelyan of Leeds exhibited a number of "dry brain" preparations and read a paper on the method of preparing them. He expressed preference for Laskowsky's method. Although there was general shrinkage the convolutions of the brain were not distorted by this method and the colour was well maintained. For demonstration purposes brains prepared in this way were of great value; they could be freely handled, they were elastic and tough, but did not become hard. Dr. Rice showed a remarkably large specimen of an aneurysm of the middle cerebral artery and gave an interesting description of the clinical features of the case.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Hypochlorous Acid as a Disinfectant.—Cretinism in Calves.—Bacteriological Examination of a Case of so-called Rheumatoid Arthritis.—A Note on the Relative Readings given by the Hæmoglobinometers of Fleischl and Haldane.—Renal Dropsy.

A LABORATORY meeting of this society was held on May 5th, Sir JOHN BURDON SANDERSON, the President, being in the chair.

Dr. F. W. ANDREWES and Dr. K. J. P. ORTON made a preliminary communication on Hypochlorous Acid as a Disinfectant.

Dr. C. G. SELIGMANN read a paper on Congenital Cretinism in Calves. He said that in every herd of Dexter Kerry cattle which had been under observation in this country it had been noted that a considerable number of monsters, showing a constant type of deformity, were born. These were, in fact, cretins and the interest of this lay in the facts (1) that they were practically limited to the breed mentioned; (2) that the condition arose in fœtal life; and (3) that it was associated with a diseased condition of the placenta in the parent cow. Of 82 calves born in two herds 19 were monsters of the type under consideration and showed the characteristic short basis cranii, very short limbs, fat pads, &c. The thyroids of all such calves examined showed absence of colloid and the usually malformed or ill-developed vesicles of the gland were choked with more or less spheroidal cells. Extracts of these thyroids when injected intravenously caused no fall of blood pressure. Clinically the pregnancy of a cow about to produce a cretin showed marked deviation from the normal and in the placentæ examined there was extreme myxomatous and œdematous change affecting many of the cotyledons.—Dr. ANDREWES suggested that the condition present in these calves was closely allied to the abnormality known as achondroplasia met with in the human fœtus. He had, however, examined the thyroid gland in cases of this disease and had never been able to discover any abnormality such as had been found in the calves described by Dr. Seligmann.—Mr. S. G. SHATTOCK said that he considered the calves described by Dr. Seligmann were true cretins and resembled exactly the condition produced by the removal of the thyroid gland in young animals If the thyroid gland was removed in the pregnant bitch the bitch underwent no cretinoid changes, but it was found that the thyroid gland of the fœtus became hypertrophied and assumed the function of the maternal thyroid gland. It was difficult to see why a healthy mother should give birth to a cretinoid fœtus when the function of the thyroid gland could be vicariously supplied by the maternal thyroid gland. Two explanations might be offered: firstly, that the disease of the placenta prevented vicarious interchange between mother and fœtus; and secondly, that the herd of cattle which produced these abnormal fœtuses were themselves in a sub-cretinoid condition.—Dr. H. MORLEY FLETCHER asked if a cow which had thrown a cretinoid fœtus would at a following pregnancy again produce a cretinoid calf. He also asked if the thymus gland had been noticed to be large in these calves.—Dr. SELIGMANN, in reply, said that although the condition of the calves might in many respects resemble achondroplasia, yet the absence of colloid substance from the thyroid gland seemed greatly in favour of the view that they were cretinoid. He did not think that there was any evidence to show that the herd of cattle were in a subcretinoid condition. A cow which had thrown a cretinoid fœtus might on a subsequent pregnancy bear a perfectly healthy calf. There was no noticeable enlargement of the thymus gland.

Mr. G. E. GASK read a paper on the Bacteriological Examination of a case of Acute Rheumatoid Arthritis. He said that a woman, aged 29 years, in January, 1903, was delivered of her second child, the labour being apparently normal and not followed by fever. A few days later the right knee-joint became hot, red, and swollen. Subsequently many joints became similarly affected, the patient being confined to bed. The appearance of the patient was one of acute polyarticular rheumatoid arthritis; both knee-joints and *ankle-joints were slightly swollen, painful, and stiff.* Both wrists and most of the carpal and metacarpal joints were in a similar condition. The case resembled those described by Garrod and Hale White. Salicylates had been given with no relief. The bacteriological examination of the synovial fluid of the knee-joint revealed both in films and cultures streptococci which were not to be distinguished from the streptococcus pyogenes. The streptococcus was injected subcutaneously into a mouse and intravenously into a rabbit and proved to be non-virulent. It was not fair to draw conclusions from this isolated case, but it could be fairly said that it resembled clinically in all respects rheumatoid arthritis and that in this particular case the disease was due to streptococci.

Dr. T. J. Horder read a note upon the Relative Readings given by the Hæmoglobinometers of Fleischl and Haldane. A series of ten estimations by different observers was made upon two specimens of defibrinated blood of known strength as regards hæmoglobin. These observations showed firstly an average difference of from 3·65 per cent. (in readings over 50 per cent.) to 4·65 per cent. (in readings below 50 per cent.) between the two instruments, this difference being in favour of Haldane's instrument; secondly, the relative *accuracy of the two instruments amounted to an error of* 1·9 per cent. in the case of Haldane's and of 4·25 per cent. in the case of Fleischl's; and, thirdly, the amount of the personal equation in the use of the two instruments was somewhat less in Haldane's than in Fleischl's.

D[illegible]ions concerning R[illegible]his own observati[illegible], pancreas, and salivary glands, that increased metabolism, as evidenced by increased secretion, invariably caused an increased production of lymph. Dr. Bainbridge supposed that increased metabolism caused the production in the tissues of metabolites having a small molecular weight and probably of a crystalloid nature These diffused into the surrounding lymph spaces, raised the osmotic pressure of the lymph, and so attracted water from the blood; an increased flow of dilute lymph occurred and the blood became more concentrated. It was probable that increased tissue metabolism invariably caused increased lymph formation and if increased metabolism occurred in nephritis it would also cause increased lymph formation which would serve as a factor in the production of œdema. Dr. J Rose Bradford's experiments on the results of removal of large portions of the kidneys showed that the kidneys normally controlled metabolism, especially in the muscles, and that if this control was removed metabolism became excessive. It was probable that a similar loss of control occurred in nephritis. Further, van Noorden had shown that in acute nephritis with œdema urea was present in large excess in the blood and œdema fluid, even though the flow of urine might be considerable and contain a fair quantity of urea. There was therefore considerable evidence that in nephritis the tissue metabolism was increased and in that case it would cause a flow of lymph which would play a part in the production of œdema. *A further point was that the œdema fluid of renal disease* was more dilute than in cardiac disease and that, as shown by Houston, the blood was not hydræmic. Both these facts were characteristic of lymph formed as the result of tissue metabolism.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—Ventrofixation of the Uterus.

A meeting of this society was held on April 17th, Dr. J. E. Gemmell (Liverpool), the President, being in the chair.

Dr. W. E. Fothergill (Manchester) showed the Placenta from a case of Acute Hydramnios which terminated with the birth of quadruplets. Labour came on at the thirty-second week. The children all died within 24 hours of birth. Dr. Fothergill also showed a Placenta illustrating marginal insertion of the cord and placenta prævia. The cord was inserted into that part of the margin of the placenta which was prævial, so that unavoidable presentation and inevitable prolapse of the cord occurred. The specimens were discussed by *Dr. D. Lloyd Roberts (Manchester), Dr. J. B.* Hellier (Leeds), and Dr. E. T. Davies (Liverpool), and Dr. Fothergill replied.

Dr. Arnold W. W. Lea (Manchester) showed the specimens from two cases of Tuberculous Disease of the Appendages removed by Abdominal Section. The diagnoses were verified by microscopical examination, although no bacilli were found in the caseous pus.—In the ensuing discussion Dr. Davies raised the question of the route of infection in such cases and held that the alimentary canal was the probable point of entrance.—Dr. Hellier considered that in some cases the semen of a tuberculous husband was the source of infection.—Dr. W. J. Sinclair (Manchester) remarked that the prognosis was especially good in the ascitic form. Flushing the abdomen was to be recommended as it stimulated recovery.—Dr. Lloyd Roberts and the President having spoken, Dr. Lea, in replying, said that the cases had occurred too recently (four months previously) to allow of a positive statement regarding the after history. The disease was primary in the Fallopian tube in both instances.

Dr. Sinclair introduced a discussion on Ventrofixation of the Uterus. The subject, in common with other operations for backward displacements of the uterus, had been of considerable interest for the last ten years or so. He thought that there was a certain amount of levity about the treatment of backward displacements when uncomplicated. Routine treatment was apt to be followed by metritis and all its troubles and it was better to put the patient to bed and gradually to restore the organ to its normal position. The operations for the treatment of backward displacements were grouped as follows:—1. With adhesions existing: (*a*) Schultze's process. Dr. Sinclair had tried it but was not able to believe that anyone could succeed. (*b*) Schücking's operation, which consisted *in freeing adhesions* per vaginam, and by the same route attaching the uterus to the abdominal parietes by a single thread. 2. Alexander's operation (1884) Dr. Sinclair's experience extended to 45 cases, but he was dissatisfied with it so far as the test of pregnancy was *concerned. The objections to it were:—(i.) The round ligament* could not always be found. (ii.) In cases where adhesions were present they prevented the uterus from being drawn forward. In these cases there were also changes in the appendages, so that the symptoms were really due to both cond[illegible] tory [illegible] forwa[illegible] be classified thus: (*a*) pre[illegible]reak down adhesions; and [illegible]my, of which Goldspohn's method was an example. 3. In 1886 Olshausen's first attempt at ventrofixat[illegible] operation had become [illegible] ventrofixation shou[illegible]e devoid of danger; (2) it must be certain and capable of being carried out in every case; (3) it must relieve the symptoms; and (4) it must stand the test of pregnancy and this without giving rise to pain or discomfort; the puerperium must go on normally and at its close the uterus must remain in a condition of anteflexion. The principle that should guide all such operations consisted in safeguarding the fundus uteri and the round ligaments and in insuring *firm* adhesion. No movement between the uterus and the parietes was permissible, otherwise the formation of bands might lead to the occurrence of ileus. A serious test for the operation was prolapsus. In such cases it must be *combined with a posterior colporrhaphy. The operation performed* by Dr. Sinclair was devised by Laroyenne of Lyons and the suture material employed was fine silk. A pessary was placed to act as a splint and the patient was kept in bed for six weeks Dr. Sinclair had done the operation about 100 times in all sorts of women but never in those beyond the menopause as he considered that the suitable cases were those of women in the child-bearing time of life. All cases had stood the test of pregnancy when it occurred, and although there had been instances of abortion and malpresentation these were not in an unusual proportion. He had had no fatality and could not recall any serious rise of temperature or pulse-rate.—The President congratulated the society upon having the discussion introduced in so lucid and able a manner by Dr. Sinclair. His (the President's) experience was limited to 15 cases, of which two were failures owing to defective technique. The others had been quite satisfactory, but as yet none had had to stand the test of pregnancy. Ventrofixation appeared to be the operation of choice in those cases of retroversion associated with adhesions, but he asked if it was an advantage to have as many sutures as those employed in the method used by Dr. Sinclair. The latter, with a record of 100 cases which had withstood the demands of his severe test, had well established the operation in this country.—Dr. Hellier considered the operation of no value in procidentia. He had seen cases so treated where after some time the cervix was found to be procident from the vulva and yet the fundus was still fixed in position against the abdominal wall, the sound passing four or five inches into the uterus. The cases of retroflexion requiring the operation were very few, although the operation gave marked and permanent relief in cases with retroflexed fundus and prolapsed and very tender ovaries where no pessary was of use.—Dr. Lloyd Roberts thought that the operation was not the most scientific that could be devised and that it was not devoid of risk was shown by the reports of fatalities after it had been carried out. He regarded ventrofixation as suitable only in cases uncomplicated by prolapse. The proper treatment for the latter was colporrhaphy.—Mr. S. Rumboll (Leeds) remarked that his experience was limited: in two cases the condition had returned, in two others partial relief had been gained but in these colporrhaphy was required, and in another two the results had been very good. He asked Dr. Sinclair if he had as much faith in the operation in cases of prolapse as in those of retroflexion.—Dr. Davies advocated Alexander's operation which in suitable cases he considered to be an excellent one. He pointed out that Alexander when he first introduced his method stated that it was only applicable to cases in which the uterus was moveable and free from adhesions due to old-standing pelvic peritonitis. When the operation for ventrofixation ran an aseptic course the adhesive reaction between the two surfaces must be so feeble that it was inconceivable that a lasting adhesion would result, and whatever union did occur would in process of time disappear. He did not agree that women who had passed the child-bearing time of life should be excluded from the benefits of the operation.—Mr. E. Stanmore Bishop (Manchester) had had very good results from Alexander's operation, although he preferred to open up the canal and to seize the ligament nearer the internal ring than Alexander advised. When adhesions existed laparotomy was performed, adhesions were freed, and the fundal extremity of the round ligament was united to a point half an inch internal to the internal ring. He believed that the uterus was normally, and should remain after operation, a mobile organ—mobile within limits, which might be fixed, but always mobile.—Dr. J. W. Martin (Sheffield) made some remarks on the method of introducing the sutures, and after Dr. A. C. F. Rabagliati (Bradford) had spoken Dr. Sinclair, in reply, said that he had never prepared the peritoneal surface in any way and had never found sinuses following the use of fine silk. Many of his operations had been performed in cases of backward displacement of old standing with adhesions and those in which the uterus was tender. As to the criterion for the operation, he thought that when an intelligent and experienced member of the profession had treated retroflexion in vain then the case was one for ventrofixation.

Bradford Medico-Chirurgical Society.—A meeting of this society was held on April 21st, Dr. H. J. Campbell, the President, being in the chair.—A discussion on Appendicitis was opened by Mr. F. Farrow and Mr. W. H. Horrocks.—Mr. Farrow defined appendicitis as a peritonitis, local or diffuse, arising in the cæcum or vermiform appendix and septic in character. The most common organism was the bacillus coli communis which, although an inhabitant of the normal intestine, acquired virulent properties in the presence of catarrh of the bowel. The chief causes of the appendicitis were stated to be undigested food in the cæcum or overloading of the bowel with masses of fæces. The irritating effects might be produced either mechanically or chemically by putrefactive products. Mechanical injuries might precipitate an attack in a diseased appendix but they would rarely cause one in a healthy organ. The opinion was expressed that many deaths certified as arising from peritonitis, volvulus, and intussusception would, if investigated, turn out to be due to appendicitis. Mr. Farrow said that cases of appendicitis might roughly be divided into (1) mild cases, (2) severe cases, and (3) surgical cases. Important diagnostic points were (1) severe pain about the umbilicus with pain on pressure in the right iliac region; (2) muscular rigidity on the right side of the abdomen; (3) fever, moderate in degree; (4) vomiting usually; (5) constipation; (6) a swelling on palpation; and (7) a history of previous attacks. Prognosis should always be guarded, as mild cases might rapidly develop a serious aspect. The treatment should be as follows:—1. Rest in bed. Rest to the bowel should be obtained by the administration of small quantities of easily digested food. Rectal feeding might be desirable. 2. Local applications, which were, however, not of much effect either for good or for harm, but leeches to the affected region sometimes relieved pain. 3. In a mild case a purgative might be given at the outset of an attack or an enema might be substituted in severe cases, when opium also should be given. The use of intestinal antiseptics appeared to be rational, especially if the colon was not overloaded with fæces. Operation was necessary in cases of perforation or where pus had distinctly formed, also in cases where attacks were of frequent recurrence.—Mr. Horrocks alluded to the structure and anatomical relations of the appendix and pointed out that they predisposed to a septic inflammation. The peritonitis was at first adhesive and consequently protective in character, and a localised abscess was the most usual result of a perforated appendix. Owing to the various positions in which the appendix might be lying an appendicular abscess might be in the iliac fossa, the right side of the pelvis, the inner side of the ascending colon, or sometimes in the cellular tissue behind the colon. There were no certain means of ascertaining the condition with which they had to deal in cases of appendicitis except by an exploratory incision, and this was attended by the risks of breaking down protective adhesions and converting a localised into a general peritonitis. After detailing the symptoms of an attack and mentioning the various situations in which an abscess might form Mr. Horrocks discussed the general indications for operative interference. He mentioned the following as indications for this interference:—1. A high temperature, from 103° to 104° F., with rapid pulse from the first and with no abatement of the symptoms within 48 hours, together with well-marked abdominal signs and symptoms. 2. When in the course of an attack the symptoms became exaggerated, the temperature either rising continuously or falling suddenly and the pulse increasing in rapidity. 3 When there were definite signs of pus formation. 4 Cases in which there was general peritonitis. If the condition of the patient permitted, removal of the appendix with drainage of the peritoneal cavity would increase his chances of recovery. After the patient had been anæsthetised and before making the incision it was well to ascertain if there was induration at any spot, for if there was the incision should be made over this. If there was no indurated spot the incision should be made rather below McBurney's point If pus was found an attempt might be made to remove the appendix, but the latter should be left if not easily removeable owing to the danger of breaking down adhesions. If pus was not found at once gauze should be packed into the wound and the intestines should be separated till the inflammatory induration surrounding the appendix was found. The cavity should be wiped out and gauze packed into it as a drain. The further from the middle line the abscess was the greater was the chance of recovery. In the rare cases of fulminating appendicitis early removal of the appendix, with flushing and drainage of the peritoneal cavity, offered the only chance. Alluding to recurrent cases Mr. Horrocks advocated removal of the appendix after recovery from a severe attack. He considered that there was an increasing tendency in practice to operate early and to remove the appendix more frequently than was the custom a few years ago.—Dr. C. F. M. Althorp alluded to the frequent association of appendicular disease with disease of the right ovary and spoke of the difficulty and danger of removing the appendix when it was adherent to the iliac vessels.—Dr. S. Johnston believed that early purgation by calomel should be practised in cases of appendicitis.—Mr. J Phillips mentioned a class of cases in which there was an absence of limiting adhesions and in which the peritonitis, though not exactly general, was very extensive. Early operation had been successful in some of these cases which had been under his care.—Mr. J. Basil Hall said that it was useless to try to lay down any definite indication for operation. Each case must be treated on its own merits, the pulse and general condition of the patient being important considerations. In cases of doubt it was better to operate early rather than to wait.—Dr G. T. Beatton also spoke and Mr. Farrow and Mr. Horrocks replied.

CHELSEA CLINICAL SOCIETY.—A meeting of this society was held on April 21st, Dr. C. C. Gibbes, the President, being in the chair.—Mr. J. D. E. Mortimer brought forward a communication from Dr. Debout d'Estrées of Contrexéville on the Association of Diabetes with the Uric Acid Diathesis. It was to the effect that Dr. d'Estrées's 35 years' experience at Contrexéville enabled him to state the following conclusions. 1 That 95 per cent. of cases of diabetes were "d'origine arthritique"—a term which might be translated as "due to the uric acid diathesis." 2. That this diabetes of arthritic origin disappeared as uric acid was eliminated by the Contrexéville mineral water treatment 3. That when a patient suffering from diabetes, whether the amount of sugar passed was small (under ·5 per cent.) or large (12 per cent.), did not eliminate uric acid as a result of the Contrexéville course of treatment the results were not so satisfactory, although Dr. d'Estrées claimed that whatever the cause of the diabetes the quantity of sugar was always reduced and the general condition of the patient was improved. Dr. d'Estrées considered that this expulsion of uric acid in the form of microscopic crystals or of gravel, coupled with the disappearance of sugar which commonly occurred towards the end of the course, although no special regimen might have been adopted, was a proof of the community of origin of gout and diabetes which had been already strongly urged by Marchal de Calvi and other French physicians. He did not insist, however, that that community of origin was absolute in all cases of diabetes. Notes of 100 cases were appended.—A discussion followed, when the opinion was generally expressed that whilst Dr. d'Estrées's conclusions were no doubt correct as regarded the class of patients, many of whom might be expected to suffer from "gouty" or "alimentary glycosuria," who frequented Contrexéville, they could hardly be regarded as of wider application —Mr. C. E. Wallis read a paper on Such Dental Information as was of value to the Medical Practitioner. He gave a *résumé* of the common dental affections which were met with, making special remarks on the subject of the sterilisation and hygiene of the mouth. Specimens were shown of dental erosion, excessive deposit of salivary calculus, &c., and a demonstration was given of the latest methods of conservative dentistry with models and specimens of dental crowns, bridges, and plateless dentures, the various advantages and disadvantages of each being explained and discussed. Mr. Wallis pointed out that unless every precaution was taken to sterilise roots on which crowns and bridges were to be placed they were doomed to failure; that when bridges were applied representing several teeth it was necessary that the roots on which the abutments were placed should be absolutely aseptic and possess a living periodontal membrane, and at the same time that they should not be subjected to a mechanical strain greater than they could bear.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A meeting of this society was held on April 22nd, Dr. E. Symes-Thompson, the President, being in the chair.—Dr. Arthur P. Luff, in reopening the discussion previously introduced by Dr. F. A. de T. Mouillot (Harrogate) on the Dietetic Factor in Health-Resort Treatment, read a paper which was published in THE LANCET of May 2nd, p 1224 —Mr. William Armstrong (Buxton) said that in spa dietary three factors had to be taken into consideration—namely, (1) the precautions necessitated by the special action of the waters of the resort; (2) certain general dietetic principles; and (3) the special necessities of the individual patient. He agreed with Dr. Mouillot's views that the rapid metabolic changes occurring during treatment by baths and waters made it desirable to give more butcher's meat than in ordinary daily life; but he considered that in order to avoid ill-effects from this course it was desirable to cut down as far as possible the starchy and saccharine elements of food, this being specially necessary when the waters depended for their efficacy upon gaseous constituents. In dieting the gouty a definite distinction should be made between those who suffered from a plus formation of uric acid and those who showed a minus excretion and also between those who were too stout and those who were too thin. In rheumatism the tendency should be towards a vegetarian dietary. In rheumatoid arthritis, on the other hand, much red meat should be given, and the dietary generally should be as generous as the patient's digestion permitted —Dr. Neville Williams (Harrogate) said that a more varied diet could be taken with the sulphur waters than with the chalybeate waters. As a general rule mutton, poultry, white fish, and farinaceous foods in moderation could be taken. Vegetables of the cabbage tribe, rhubarb, and most fruits were to be avoided.—Dr. Blaker said that from personal experience he considered that red meats increased the quantity of uric acid All vegetables (potatoes excepted) grown in the sun and air were preferable to those grown under ground. Fruit often disagreed with patients taking iron tonics; dry cider, lemon drinks, moselle, and some ports suited gouty and rheumatic subjects.—Mr. W. Bowen Davies (Llandrindod Wells) considered that the British public would not consent to the restrictions in their own country which they consented to abroad. As a drink cider in his experience was bad in lithiasis, but he found a dry perry the very best drink in gout —Dr John Braithwaite (Buxton) said that the difficulty to him seemed to be in getting hotels and similar establishments to prepare a simple menu —Dr. R. Fortescue Fox, Dr. C. W. Buckley (Buxton), and Dr. W. V. Snow (Bournemouth) also took part in the discussion.

ULSTER MEDICAL SOCIETY.—A meeting of this society was held on April 23rd.—Dr. Robert McDowell read notes of a case of Puerperal Eclampsia in a primipara who was seized with convulsions in the seventh month of gestation. She was treated with purgatives, diaphoretics, the hot pack, morphia, chloroform, venesection, and saline transfusion, but as there was no improvement and as she had passed through 13 convulsions, it was decided to induce labour, which was done by Professor J. W. Byers with Bossi's dilator. This was carried out under chloroform, and the cervix, which only admitted the index-finger when the dilator was introduced, was in less than half an hour so expanded that forceps could be applied and the delivery of the child completed. The patient made a good recovery —Dr. J. J. Austin read a paper on the Prevention and Treatment of Puerperal Eclampsia. He urged the importance of keeping as much supervision as possible over patients especially during the last two or three months of gestation, as when they were treated in the pre-eclamptic stage eclampsia could be rendered as preventable a complication as post-partum hæmorrhage or sepsis. In the treatment of eclampsia he recommended venesection if the face was flushed and the pulse was full, the injection of saline solution, and the subcutaneous injection of morphia with induction of labour if these measures failed. He suggested that when delivery had been carried out without previous venesection the good results frequently following delivery might be largely attributable to the loss of blood occurring at the birth and not to the withdrawal of the fœtus, since the fits often ceased after venesection without delivery —Professor Byers showed and explained the method of use of Bossi's dilator which had been successful in Dr. McDowell's case He thought that it was a most useful addition to the obstetric armamentarium and that many, if not the great majority of, cases of eclampsia could be prevented by careful prophylactic treatment.—Dr. H. O'Neill, Dr. R. W. Leslie, and Dr. J. Lynass also spoke —Mr Dryden Stead, Dr. A. Fullerton, and Mr. R. Campbell showed various cases and specimens.

SOUTHPORT MEDICAL SOCIETY.—A meeting of this society was held on April 29th, Dr. F. J. Baildon, the President, being in the chair.—Dr. E S. Yonge described two [illegible] Larynx on which he had [illegible] dry hoarseness in a patie[illegible]oss of motility and sluggish movements in the vocal cord on one side, were very suspicious symptoms. The operation of thyrotomy with immediate closure of the wound was advocated, an important point being the application of cocaine to the larynx during operation.—Mr. S. B Fenn read notes of a case of Malarial Fever complicating the puerperium and simulating septic infection.—Dr. William Carter of Liverpool read a paper entitled "Some Clinical Reports and the Lessons they Teach." The value of the following procedures amongst others was insisted upon: (1) antiseptic nasal douching in persistent feverishness; (2) slow dilatation in stricture of the cardiac orifice of the stomach; (3) the removal of the sources of irritation in stricture of the bowel from cancer, &c.; (4) counter-irritation in hypertrophic cirrhosis of the liver; and (5) innunction of animal fats—e.g., bacon fat—in wasting diseases.

ERRATUM.—In the report of the meeting of the Society for the Study of Disease in Children in THE LANCET of May 2nd, p. 1240, the words "it did not come" in line 13 should be *it came.*

Reviews and Notices of Books.

Encyclopædia Medica. Under the general editorship of D. CHALMERS WATSON, M.B., F.R.C.P. Edin. Vol. XII., Syphilis to Typhus Fever. Edinburgh: William Green and Sons. 1902. Pp. 528. Price 20*s.* net per volume.

THIS volume contains so many excellent articles that it is difficult to select those which deserve special mention. It is a matter for congratulation that the editor has been able to secure such valuable contributions and as space permits us only to refer to a few of them the omission of others does not imply that they are any less praiseworthy.

The article on Syphilis is by Mr. D'Arcy Power, assistant surgeon to St. Bartholomew's Hospital. After a brief historical review, Mr. Power proceeds to discuss the distribution of the disease, its general pathology, modes of infection, and classification; then follows a detailed account of the symptoms and treatment of the various forms. Mr. Power's manner of writing at once attracts attention and he has succeeded in compressing a vast amount of information into the 44 pages which this article occupies. The remarks on Syphilis in Children are particularly worthy of attention.

The subject of Tabes Dorsalis is admirably considered by Dr. F. W. Mott, F.R.S., director of the London County Asylum, Claybury. He naturally lays great stress on syphilis as an etiological factor and states that "it is the opinion of many authorities that if there were no syphilis there would be no tabes." His own views evidently go far to support this proposition, for he says: "According to my observations, by far the most important, if not the essential, factor is syphilis." Another factor, however, is undoubtedly necessary for the production of tabes dorsalis, and that, Dr. Mott maintains, is nervous instability, the product of civilisation. The section dealing with symptomatology contains a full and lucid description of the clinical phenomena occurring in connexion with this disease. Dr. Mott claims that the most important symptom undoubtedly is the Argyll-Robertson pupil, for in no other disease except general paralysis does this sign exist; he is strongly of opinion that this fact can be upheld and believes that the existence of this symptom alone would justify a practitioner in saying that the patient was a candidate for either tabes dorsalis or general paralysis, and adds: "This is the strongest argument in favour of the unity of these two diseases and of their syphilitic origin."

Notice must be taken of the article on Teeth by Mr. G. W. Watson, lecturer on dental surgery and pathology, Edinburgh Dental Hospital. An interesting survey is given of the comparative anatomy of the teeth and then the genesis of the teeth is carefully considered. The chief morbid conditions affecting the teeth are well dealt with, such as dental caries, diseases of the pulp, and alveolar abscess. The mechanical operations connected with dentistry are also described. An interesting section is that headed "Oral Sepsis and General Bacteriology of the Mouth"; due credit is given to Professor Miller of Berlin for his researches on the micro-organisms found in the oral cavity.

Under the heading "Therapeutics" there are three separate articles: Physical Therapeutics, by Mr. Ernst Flodin (Sweden and Edinburgh); Serum Therapy, by Dr. William Murrell, physician to the Westminster Hospital; and Health Resorts, by Dr. Edmund Hobhouse of Brighton. Considerable space has been devoted to the consideration of Physical Therapeutics. As is pointed out in some editorial remarks which precede this article, the words "massage" and "masseur" have come to bear, in this country at least, a somewhat contemptuous meaning. Uneducated persons have been in times past largely employed to carry out the instructions of qualified practitioners. Fortunately this defect has now been to a large extent remedied; the numerous benefits to be obtained by scientifically applied manipulations are only just beginning to be appreciated by the medical faculty in Great Britain and doubtless much harm has been done by irresponsible persons claiming to "cure" patients without having recourse to genuine medical advice. Mr. Flodin's contribution occupies 57 pages and gives a very full account of the various exercises which may be practised when applying "physical therapeutics"; it also recounts several illustrative cases. The value of the article is increased by the reproductions of numerous photographs depicting the movements which are employed.

There are two articles on the Thyroid Gland and its Diseases. The medical aspect is considered by Dr. G. R. Murray, physician to the Royal Infirmary, Newcastle-on-Tyne, and the surgical aspect by Mr. Frederick Page, professor of surgery in the University of Durham. Both contributions are well written and contain the most modern views on their respective subjects.

In an article on Tuberculosis Dr. Theodore Shennan, senior pathologist to the Royal Infirmary, Edinburgh, discusses in a most able manner the relationship of human and bovine tuberculosis. The views of Professor Koch are fully set forth, but Dr. Shennan comes to the conclusion that the milk of tuberculous cows can cause the disease, though, as a rule, only in weakly individuals whose resistance is greatly lowered, and, secondly, that such milk is dangerous only when the bacilli are present in great numbers or "when it is ingested for a length of time."

There are many other articles to which we should have liked to refer had space permitted; we can, however, only mention some of them: Tumours, by Mr. J. Bland-Sutton; Typhoid Fever, by Dr. S. P. Phillips; Toxicology, by Dr. J. Dixon Mann; and Dangerous Trades, by Dr. Thomas Oliver. This volume fully maintains the prestige established by its predecessors.

Portfolio of Dermochromes. By Professor JACOBI of Freiburg im Breisgau. English adaptation of Text by J. J. PRINGLE, M.B. Edin., F.R.C.P. Lond., Physician to the Department for Diseases of the Skin at the Middlesex Hospital, London. London: Rebman, Limited. 1903. Parts I. and II. 42 Plates. Price, 4 parts, £2 10*s.*

THESE are the first two parts of a new atlas of diseases of the skin which has been arranged by Professor Jacobi and the text has been translated and adapted for the English edition by Dr. J. J. Pringle. The atlas is intended chiefly for those members of the medical profession who are in general practice, and in this respect it differs from most of the numerous atlases of dermatology, which are intended mainly for those who have a special knowledge of diseases of the skin; and therefore the atlas before us concerns itself with the commoner manifestations of cutaneous disorders and not with those rare diseases which are only of interest to professed dermatologists. In no other class of diseases are coloured illustrations so important as in affections of the skin and though many treatises on the subject exist, yet it is difficult to name an atlas suitable for those who are not specialists. We think that the work before us admirably supplies this want, if we may judge of the whole by the parts already received The illustrations for the most part are taken from models in the Breslau clinic and they have been reproduced in colours by a new four-colour process called citochromy This method was invented by Dr Albert of Munich and is very successful in nearly every case in reproducing the exact tints of the original They are the happiest results which we have seen of any photo mechanical process of colour-printing In these two parts there are 42 plates, but nearly every plate has two illustrations on it and some have three, so that there are 90 illustrations in all It is difficult to imagine a more useful atlas for those in general practice The text is in no way intended to take the place of the ordinary systematic treatises on dermatology and therefore it has been condensed as much as possible without the omission of essential facts The English translation is very satisfactory and altogether we can recommend this book Dr Pringle has in one place put a footnote which records the fact that the text does not quite coincide with his own views and there is one other passage which should be amended In the description of variola the author, as pointed out by Dr C Killick Millard in THE LANCET of April 25th, p 1197, does not recognise that variola may occur in an unmodified form even though the patient has been vaccinated Of course this is rare, but the statement in the text is far too absolute and should be altered in a second edition The plates may be purchased loose in portfolios or they may be obtained bound in various styles for a few shillings extra

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A Text book of Anatomy By American Authors Edited by FREDERIC HENRY GERRISH, M D Second edition, revised and enlarged With 1003 engravings in black and colours London Henry Kimpton Pp 944 Price 32*s* net

AS set forth in the preface, the aim of the editor of this system of anatomy has been to produce a systematic work of convenient size for the student of medicine For this purpose essential facts only have been presented and considerable effort has been made to 'simplify descriptions which experience has shown commonly cause difficulties to students The book throughout bears evidence of this attempt at simplification and abridgement and, although in size it is almost equal to the text-books in common use in this country, the impression left on the reader's mind, whatever section he consults, is that of a certain incompleteness and a lack of that scientific precision which constitutes the charm of a well written text-book on an exact science. There are many points in the system, however, which are worthy of commendation Much care has everywhere been taken to illustrate the meaning of the anatomical terms which are used and quite early in the volume a series of paragraphs is devoted to the names and delimitations of superficial parts of the body These sections should prove very useful to the student commencing the subject The book is arranged on the usual lines but with the briefest of embryological introductions A special short section is devoted to fasciæ and bursæ which is an advantage, as to get a clear idea of these structures from the ordinary text book necessitates a laborious process calling for a frequent reference to the index Relational Anatomy is the heading of a section which presents some novel features It consists of three sub divisions, under the headings of Plane Sections, Surface Anatomy, and Normal Skiagraphs The pictures are here mostly left to tell their own tale, so that this section is virtually an atlas to be used in connexion with the other parts of the book and is not strictly comparable with regional or topographical anatomy as usually understood

The pictorial and diagrammatic illustrations are a striking feature of the book and give it quite a character of its own It is true that many of the illustrations are old friends which have already appeared in Testut's "Anatomy" and Kocher's "Surgery," but there are others which are both new and instructive A series of diagrams by the editor in which the areas of attachment and actual outlines of the muscles are superposed in red on the skeleton is a novel and useful feature The book contains, too, a particularly good series of plane sections in outline with the names of the structures, as far as possible, engraved directly on them Most of these are placed in the section on Relational Anatomy but others are found in the section on the Vascular System At the risk of repetition it would have been well to have depicted them again in the former situation to make the series locally complete Surface anatomy is illustrated by a series of reproductions of photographs with outline keys, such as are usually met with in atlases of artistic anatomy The normal skiagrams are not the best that we have seen, they were probably prepared in the earlier days of skiagraphy

We are inclined to question the utility of the section on Practical Anatomy It is merely a tabular dissection guide and cannot with advantage replace a proper dissection manual

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JOURNALS AND MAGAZINES

Journal of Anatomy and Physiology Conducted by Sir WILLIAM TURNER, K C B, F R S, D J CUNNINGHAM, M D, F R S, G S HUNTINGTON, M D, A. MACALISTER, M D, F R S, and J G M'KENDRICK, M D, F R S Vol XXXVI New Series, Vol XVII, Part 3 London. Charles Griffin April, 1903 Pp 92. Price 6*s* —The articles contained in this part are —1 On the Development and Homology of the Mammalian Cerebellar Fissures, by O Charnock Bradley, M B Edin, professor of anatomy, Royal Veterinary College, Edinburgh 2. Observations on the Relations of the Deeper Parts of the Brain to the Surface, by Johnson Symington, M D Edin, professor of anatomy, Queen's College, Belfast, with six plates 3 Peculiar Malformation of the Tricuspid Valve of the Heart, by T Wardrop Griffith, M D Aberd, professor of anatomy at the Yorkshire College; with a plate 4 Note on a Second Example of Division of the Cavity of the *Left Auricle into two Compartments by a Fibrous Band*, by T Wardrop Griffith, M D Aberd 5 The Cerebrum of a Microcephalic Idiot, by N C Macnamara, F R C S Eng, and R H Burne, anatomical assistant in the Museum of the Royal College of Surgeons of England The posterior lobes of the cerebrum of this brain only very partially covered the cerebellum, the insula was a mere nodule, and the orbital and frontal opercula were wanting Some good reproductions of photographs accompany this article. 6 A Description of Some Anomalies in Nerves arising from the Lumbar Plexus of a Fœtus and of the Bilaminar Musculus Pectineus found in the same Fœtus, with a Study of the Variations and Relation to Nerve supply in Man *and some other* Mammals, by Edward B Jameson M B, Ch B Edin 7 Complete Absence of the Superficial Flexors of the Thumb and Concurrent Muscular Anomalies, by H S Hall, B A. Cantab, with a plate showing a *dissection of the parts* 8 A Method of obtaining Uniplanar Sections with the Ordinary Rocking Microtome, by W Sampson Handley, M S Lond 9 Archæologia Anatomica (anonymous) The term "hilum' is here considered and it is shown to be a good and ancient classical word and one that should be used instead of hilus 10 Thirteenth Report on Recent Teratological Literature by Bertram C A. Windle, M D Dub, F R S. 11 Proceedings of the Anatomical Society of Great Britain and Ireland, January, 1903.

The Cornhill —The May number of this magazine has an interesting article upon Liebig who, the writer says, ' is known to most of us only as the inventor of a method of preparing 'extract of meat.'" We hope that "most of us" does not include the members of the medical profession, for Liebig was, quite apart from his studies in foodstuffs, a most eminent chemist. He did an immense amount of work in organic chemistry and applied chemistry to agriculture and to physiology in a manner that created quite a revolution in the study of the science. Other notable articles are a cheery account of life on board the *Britannia* and a charming paper upon Bird-nesting and Bird-nesters.

HOSPITAL MAGAZINES.

St. Bartholomew's Hospital Journal for March contains the concluding portion of a paper by Mr. E W. G. Masterman on the Cholera Epidemic of Last Autumn in Palestine. This is one of those records of first-hand experience that medical men like to read: it teaches us to understand the problem of disease in novel environments. "Paterfamilias" writes a letter to the effect that much valuable instruction is lost by teaching children nursery rhymes which are quite nonsensical. For the children of medical men he suggests that the old rhymes might be altered. From among the examples which he gives we take the following :—

"Sing a song of sickness, yellow in the eye,
Four-and-twenty gall-stones choledecto-my!
When the wound was opened, the bile began to flow;
When the deuce it's going to stop the doctor doesn't know!"

And again :—

"Three blind boils!
See how they run!
They all ran, after the farmer's wife
Had cut off their heads with a septic knife;
You never saw such a mess in your life
As three blind boils."

Charing Cross Hospital Gazette for March, which celebrates its fifth volume by appearing in a new cover, contains as its *pièce de résistance* a report of a lecture on X Rays and Localisation by Mr. James Mackenzie Davidson.

St. George's Hospital Gazette for March contains a readable note by Dr. Robert Barnes on Sea Salt, with special reference to the Mediterranean. Mr. B. N. Tess deals with Symptomatic Parotitis. In connexion with this subject the editor calls to mind the objection to the term "parotitis" raised by a celebrated member of St. George's consulting staff: "Parotitis! Parotitis! I never heard that the patient had a Parot." "No doubt, parotiditis is more correct etymologically," says the editor, "but the briefer form parotitis at any rate has the sanction of common-sense."

King's College Review.—The March number of this magazine is not confined to the medical side of King's College, but medical matters are dealt with in a fair proportion of its pages. From an instructive history of pathology we extract a nursery rhyme which would appeal to "Paterfamilias" whose letter to the editor of the *St. Bartholomew's Hospital Journal* we have already referred to :—

"Sing a song of sepsis,
Pockets full of pus;
Half a million cocci;
Patient wuss and wuss.

"When the wound was opened
How the surgeon sings—
'Nasty bad condition
To occur at King's.'"

The London Hospital Gazette for March, a good issue, contains a clinical supplement devoted to Dementia Paralytica, whilst the *Gazette* itself is filled with reports relating to hospital matters interspersed with papers of a lighter nature. "Geneva," being the impressions of a tourist with a short history of the city illustrated with reproductions of photographs, is a readable article.

St. Mary's Hospital Gazette for April has for its chief feature a paper by Mr. H. S. Collier on Errors of Ancient Surgery.

St. Thomas's Hospital Gazette.—The March number opens with the report of an address delivered before the Medical and Physical Society of the hospital by Staff-Surgeon G. Walsh, R N., in February last. After detailing the advantages of life in the Royal Navy, Staff-Surgeon Walsh says in reference to the disadvantages: "Life in any calling is not a bed of roses and you will have to put up with many rubs. I believe that they are no worse—and do not occur so often—than they are in civil life, and you will have to learn to take the rough with the smooth."

ERRATUM.—In our review of "Human Personality and its Survival of Bodily Death" which appeared in THE LANCET of May 2nd, p. 1241, there appeared, about 20 lines from the bottom of column 2, the following sentence: "It possesses a very high degree of solid value precisely as a work of analytical psychology, as an exploration of that subliminal region of the mind. This region is below the usual level of consciousness in which ...... arise." The sentence should have read: "It possesses a very high degree of solid value precisely as a work of analytical psychology, an exploration of that subliminal region of the mind below the usual level of consciousness in which ...... arise."

Looking Back.

FROM

THE LANCET, *SATURDAY*, MAY 7, 1825.

FOREIGN DEPARTMENT.

ANALYSIS OF FOREIGN MEDICAL JOURNALS.

ARCHIVES GENERALES —MARCH.

Case of Fracture of the Clavicle, and subsequent ossific Union in a Fœtus.

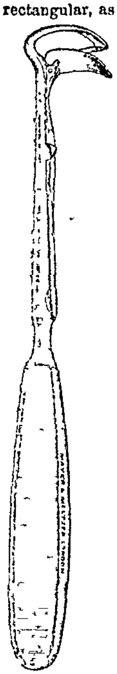
The following case of fracture of the clavicle, read at a late Sitting of the Royal Academy, by a M. Devergie, is a very curious one, and serves to show that the doctrine which has been so long current respecting the impossibility of ossific union being effected, in the case of fracture of a fœtal bone, is incorrect. It has been said, that if, by any accident even in delivery, the bone of either extremity should be broken, that it will not be again united by an ossific union. For this opinion we have never heard any good reasons; and the fact recorded by M.D. refutes it altogether.

A woman in the sixth month of pregnancy, received a violent blow on the abdomen, by falling from a high chair against the corner of a table. The pain which succeeded to this accident was very severe, and continued so for some time. It gradually diminished, and, at the end of the proper time, she was delivered of a very fine child, which was discovered to have a very large tumour in the region of the left clavicle. The child died on the eighth day after its birth, from what cause is not named; and on a careful examination of this tumour, the clavicle was found broken, and one of the fractured portions had projected over the other. They were united by a large and solid callus, which formed the principal bulk of the tumour. The preparation is safely deposited in the Anatomical Museum of the Hospital of Val-de-Grace, and has been examined by a great number of practitioners. The circumstances of the case appear to justify the supposition that the fracture was produced by the violent blow received on the abdomen.

HOSPITAL FOR EPILEPSY AND PARALYSIS.—Princess Louise, Duchess of Argyll, has signified her intention of performing the opening ceremony in connexion with the new Hospital for Epilepsy and Paralysis, Maida-vale, W., on June 13th. We are requested to state that applications for tickets of admission should reach the secretary not later than May 13th

New Inventions.

THE SPRING-GRIP CURETTE FOR THE REMOVAL OF ADENOIDS.



THE blade of the curette is straight and the fenestra rectangular, as shown in the illustration, the cutting portion of the blade being at right angles to the shaft. Up to this point it is practically a Beekmann's curette. To the shaft is fitted, by means of a detachable joint, a long spring, to the terminal end of which is hinged a thin plate which fits accurately into the fenestra of the curette on three sides, but with its anterior limit in contact with the bevelled surface of the blade at about one-sixteenth of an inch from the cutting edge. As the curette is pressed on the growth the plate is forced open by the pressure of the growth on the under surface of the plate. The curette travelling backwards and downwards, the growth passes between the blade of the curette and the edge of the plate. On withdrawing the curette the grip on the growth between the plate and the blade is sufficient to extract the growth by its inferior margin. Its advantages over the cage are as follows: (1) it admits of the presence of the guiding forefinger in the post-nasal space as it takes no more room than the open curette and there is therefore no necessity to have a view of the pharynx, so that there is a slight saving of time which is of advantage when operating under gas; (2) the curette cuts cleaner, as the edge does not get blocked by the retention of the growth in its vicinity; (3) it does not leave the growth hanging in the pharynx, as is sometimes the case with the cage; (4) it removes the growth in a single piece if the stroke is carried through at an even depth and the growth is continuous in structure, never dropping it out if the curette is removed with care from the pharynx; and (5) the time taken in removing the growth from the curette is less than that taken in changing the instrument for another one. I am indebted to Messrs. Mayer and Meltzer of Great Portland-street, London, W., for the care they have taken in carrying out the design.

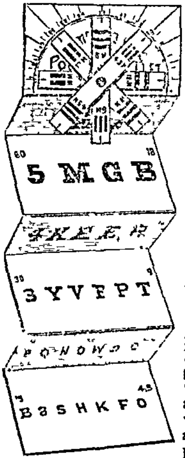
MACKAY MACDONALD M.B., B C Cantab.,
Senior Clinical Assistant, Throat Department,
Harley street, W. King's College Hospital.

IMPROVEMENTS IN HANSOMS.

IN THE LANCET of April 18th, p. 1119, we discussed under the heading "The Objections to the Hansom," the various faults to be found in "the gondola of London" and at the same time we expressed our astonishment that no light, comfortable, four-wheeled open vehicles were to be found in London. We now learn that a consignment of small victorias is coming over from Paris, a fact we are very pleased to learn, and we can only say that we wish them fine weather. But with regard to the hansom there has been brought to our notice a new form of hansom which certainly is free from most of the faults to which we took objection as existing in the present style. The cab in question is called the Alington cab and instead of the ordinary doors and guillotine window possesses semicircular doors, with windows in them which move up and down in the ordinary way. These doors are opened or closed simultaneously by the driver and getting into or out of the cab is thereby rendered easy. The cab is fitted with a band-brake acting on the hubs of both axles, a piece of apparatus which we think is most desirable. Curiously enough, however, the patentees inform us that the members of the London cab trade, with that hidebound conservatism which is losing our country so much trade, refuse to use the brake on the ground that they never heard of a brake for a two-wheeled vehicle. It is quite true that in the south of England, at any rate, the simple tyre brake acting on both wheels which is so common in foreign countries is never used, the only brake being the iron-shod drag-pole which sticks out behind and on to which the body of the cart is tilted. To our minds the Alington cab is a great improvement upon the ordinary hansom. Of course, if the doors are shut and the windows are open it is draughty, but even with the windows up the ventilation is good and the sensation is that of driving in a small brougham. From a personal trial of the cab we can congratulate the inventor on the comfort and comparative safety of his vehicle The cabs can be seen at, or hired from, Mr. J. E Gentle, Old Manor Yard, adjoining Earl's Court Station, but as yet there are only a few plying for hire.

We have also received from Mr. W. F. Stevenson of Boscombe a sketch and description of two improvements applied by him to the ordinary hansom. One is the substitution of a revolving glass hood in place of the guillotine window and the other is the substitution of a wheel on the "gravel iron" in place of the usual loop of iron. Neither of these improvements is new and the latter was brought to our notice in 1900 by Captain Dickson and described in THE LANCET of Sept. 29th, 1900, p. 981. The former modification has been applied to hansoms for some years, but both modifications are among the first to suggest themselves to anybody who studies the matter and we do not for a moment suppose that Mr. Stevenson was aware that his ideas had been anticipated.

TEST-TYPES FOR THE POCKET.



THIS appliance has been designed for the purpose of meeting the difficulty which from time to time arises from not having a convenient and ready form of types for testing the vision in patients' houses. It consists of seven cards, united by strips of linen, measuring 6½ inches by 4 inches, upon one side of which are printed Snellen's Distance Types and on the other types for reading; in addition the topmost card is perforated in its centre with a revolving pin which secures four strips of stout cardboard. At each extremity is a set of horizontal and vertical lines. These lines vary in thickness from those visible at 18 metres to 12, 6, and 4·50 metres respectively, while behind the lines is printed on the card a graduated arc, indicating the axes which they can be made to assume. This arrangement provides for the testing of cases of astigmatism, and thus the appliance forms a handy, complete, and compact visual test, especially adapted for use in patients' homes. The whole folds into a small space occupying about 6½ inches by 4½ inches by ⅛th of an inch, and can be readily carried in the pocket. The publisher is Mr. F. Davidson, Optician, 140, Great Portland-street, London, W., who supplies it at a trifling cost

PERCY DUNN, F R.C S.Eng.,
Ophthalmic Surgeon to the West London Hospital; Lecturer on Ophthalmology at the West London
Wimpole-street, W. Post-Graduate College.

CROWNHILL CONVALESCENT HOME.—The annual meeting of the subscribers to the Crownhill Convalescent Home, near Plymouth, was held on May 1st. The report stated that during the past year 259 patients had been admitted. The financial statement showed that the expenditure had amounted to £520 and that an adverse balance of £29 remained against the institution. Dr. C. A. Hingston, the founder of the home, was reappointed honorary physician.

THE LANCET.

LONDON: SATURDAY, MAY 9, 1903.

"Opticians" and Spectacle Prescribing.

A CONSIDERABLE amount of feeling has been excited in the minds of many members of the medical profession by the modern claim of spectacle-sellers to possess a degree and kind of scientific knowledge which would render them trustworthy advisers on all matters relating to the employment of the useful instruments in which they deal, and by the modern claim of the commercial bodies with which they are connected, or from which they obtain some kind of licence or diploma, to test the possession of this knowledge by means of examination. It is impossible to traverse the streets without seeing an announcement that So-and-so is an "ophthalmic optician," whatever this grotesque combination of words may be supposed to mean, and that he is not only prepared "to test the sight" of his customers but also to advise them with regard to the appliances by which any defects that he may discover can be rectified. An "optician," according to Dr. JOHNSON'S definition, is "one skilled in the science of the nature and laws of vision," and "ophthalmic," which does not appear in JOHNSON, is defined by the later authority of WEBSTER to be "that which has relation to the eye," so that the addition of the adjective to the description of a tradesman is at best a pleonasm, and frequently, without doubt, is a misleading one. Those who are thus described, however, have during the last few years not only held themselves out as competent or even exceptionally skilful advisers of the public with respect to their sight, but they have even gone to the length of recommending medicaments as well as spectacles and of selling lotions which have not always proved to be harmless. Quite recently an action was brought by one of these so-called "opticians" against a druggist who had supplied him with ready-prepared "eye lotions" for all cases, one of which lotions was productive of serious injury to the purchaser.

It must be admitted, of course, that spectacles were made and sold by the trade and were freely used by the public, as well as that a Worshipful Company of Spectacle Makers existed, long before the investigation of the eye as an optical instrument had been undertaken by physiologists; and it is not unworthy of note that the opinions held by the "opticians" of the pre-physiological days with regard to the refraction of the eye and its derangements were wholly and in every respect erroneous. In any book on "optics" written 50 years ago it will be found stated that short-sight is produced by undue convexity of the cornea, with consequent excess of refractive power, and that presbyopia is produced by gradual flattening of the cornea, with consequent gradual diminution of refractive power. Spectacles for short sight were only considered in relation to their [illegible] better distant vision; and, [illegible] ultimate loss of sight in chronic glaucoma were usually attended by a demand on the part of the sufferer for stronger and stronger reading spectacles, it became the custom of the "trade" to attribute the loss of sight to the strength of the glasses and solemnly to utter foolish warnings against the employment of any which were "too strong." Before the days of BREWSTER there was at least no common knowledge of the existence of the function of accommodation or of the possible nature of its derangements and long after his days the old errors were copied from text-book to text-book. In a thousand years physical opticians had done absolutely nothing to attain to any real knowledge of the functions of the eye as a seeing organ or of the various ways in which [illegible] functions were liable to be disturbed and but for [illegible] physicians they would to-day be very much where they were in China in the days of CONFUCIUS or in Egypt in those of the Shepherd Kings.

With the entrance of physicians and physiologists upon the scene all this was changed. The science of physiological optics was created by THOMAS YOUNG, the discoverer, among many other things, of astigmatism; and the slowly growing knowledge of the next quarter of a century was fully set forth and systematised in 1864 in the monumental work of DONDERS, himself the discoverer, again among many other things, both of hypermetropia and of the dependence of myopia upon elongation of the eyeball instead of upon faulty curvature of the cornea—a discovery which at once led to new views of the seriousness of the affection and of the principles upon which its treatment should be conducted. The power of accommodation, first recognised by KEPLER, had been analysed by YOUNG; and to its gradual diminution, instead of to an imaginary "flattening of the cornea," the phenomena of presbyopia at length came to be attributed, with the result that the visual errors thence arising were for the first time corrected on scientific principles. At a still later period the actions or defects of the ocular muscles became the subjects of medical investigation, largely in the United States of America; while the use of prismatic spectacles, first suggested by GIRAUD-TEULON, was placed upon a scientific foundation by SCHEFFLER of Brunswick. Even more recently, these have to some extent been superseded by surgical operations upon the muscles, either by tenotomy of any which are acting in excess or by advancement of the insertions of their antagonists, measures in respect of which, again, we have to admit a large indebtedness to America. In all this progress, by which the use of spectacles has been raised from a matter of often ignorant routine to the level of a science, every step has been made by medical practitioners, and not a single one by any "optician," either real or so-called; while not the least of its consequences has been to show that the treatment of optical defects of the eyes is in many cases a matter of very grave responsibility, which can only be safely undertaken under the guidance of complete medical and physiological knowledge.

We presume it will be universally admitted that even for the prudent discharge of the proper duties of their trade—that is to say, for the manufacture and sale of spectacles

—it is, on the whole, desirable that modern so-called "opticians" should have some knowledge of underlying principles and that they should be rescued from talking sheer nonsense as the ordinary daily jargon of the counter. It is, moreover, certain that the practically almost universal need for reading spectacles at 45 or 50 years of age can, in the great majority of cases, be safely and well supplied by rule of thumb, without further examination of the eyes than can be accomplished by any of the ordinary forms of optometer, while it may also be conceded that the majority of the public will be unwilling to pay a medical fee for advice on what they ignorantly conceive to be a very "*simple*" question indeed. The chief value of such advice, of course, is as an insurance against the existence of any actual or incipient disease of the eyes which a spectacle-seller would be liable to overlook and which might require something more than the ordinary convex glasses of a dioptre or a dioptre and a half. The conditions are precisely analogous to those which exist in relation to the sale of medicines by druggists. The man who is at once poor and rash, or perhaps who is rash without being poor, submits himself to what is known as "counter practice" and has something "put up" which it is supposed will meet the requirements of his case. The man who is not rash consults a physician and goes to the druggist with a *prescription*. Unfortunately, however, the spectacle-sellers of the present day have fancied that they have caught the physicians bathing and have tried to run away with their clothes. They have endeavoured to set themselves up as superior authorities and they call upon their trade organisations to assist them in this endeavour. They allege, perhaps not without some show of reason, that a certain proportion of medical practitioners have not studied the questions at issue and are less qualified to give advice concerning them than they are themselves. To whatever extent this may be true, the medical practitioners so situated would at least be conscious of their own want of information on the particular subject, would be fully alive to the possibilities of doing harm, and —not the least important element in the case—would have no spectacles to sell as a sole basis for remuneration. They would refer their patients to someone better fitted to bear the burden of advising them. In the meanwhile, commercial bodies of presumed respectability, such as the Spectacle Makers' Company, cannot be too careful not to assist their Freemen or others connected with them in assuming responsibilities which they are unfitted to discharge; and medical practitioners will act wisely in assisting the public to understand that many spectacle-sellers are not only ready, but even eager, to rush in where the practitioners themselves may properly fear to tread.

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Aspects of Life Assurance.

THE *Journal of the Society of Arts* recently published an interesting paper read before the society by Mr. WILLIAM SCHOOLING, entitled "New Aspects of Life Assurance." The novelty mainly lies in Mr. SCHOOLING's treatment of his subject, in the attention which he calls to the evolution of the principles and practices adopted by life assurance societies, and in the ingenious comparisons with which he has been able to illustrate this branch of his topic. Incidentally, however, to the consideration of the historical and scientific aspects of life assurance in a lecture which will repay perusal in full, Mr. SCHOOLING makes some observations of a practical character which should be noted by those who contemplate insuring their lives and by medical men whose interests in such a matter are often very close.

The varied possibilities and combinations of life assurance deserve the close attention of all professional men and of none more so than medical practitioners who have little opportunity for making advantageous investments and little time to study the safest methods for disposing of savings which in many cases are not large. The duty of providing for the contingencies of old age and death need not be dwelt upon, but it must be borne in mind that some will desire one form of assurance and some another, one man, for example, wishing for a life income after a certain date, another for a life income with the repayment of a capital sum to his personal representatives, and another being content that his wife and family should receive the proceeds of his assurance, without desiring to derive any income from it during his life. With regard to such as these Mr. SCHOOLING calls attention to the fact that different companies devote themselves more than others to different forms of assurance in which they, so to speak, specialise, and observes that companies which confine their business to life assurance generally give better results to their policy-holders than offices which transact many different branches of assurance business. Some companies, again, he remarks, by way of example, give relatively superior results under endowment assurances and relatively inferior results under whole life policies, and others are exceptionally good for policy-holders entering at the older ages. While deprecating such differences he urges the advisability of comparing the results obtainable from different offices in accordance with the nature of the assurance desired, and suggests that there is an opening for the development of the specialist in life assurance who should be familiar with the best points of all the companies and ready to advise intending policy-holders as to their relative merits. For the methods adopted by the best British Life Assurance Offices Mr. SCHOOLING has nothing but praise and he calls attention to the favourable conditions in which they conduct their business under the Acts which regulate their procedure.

In the latter part of his paper dealing with the varieties of form which life assurance is capable of in the hands of modern experts, Mr. SCHOOLING illustrates his topic by reference to those who may desire a fixed and safe interest upon a capital sum during their lives and the certainty of an unimpaired capital for their survivors, but who at the same time may wish to have a substantial sum of money to devote immediately to some special object As an example of such a special object Mr. SCHOOLING takes a possible donation to a hospital and points out that a donation of £1000 to such an institution may be of more advantage to it at a time of need than an annual subscription of £60 during the subscriber's lifetime, while the donor may prefer the position with relation to the government of the hospital which such a gift, if made during his lifetime, would secure to him. The tables by which he explains this show, if we select examples from them, that a man 40 years of age who desires to invest £10,230 so as to receive a safe 3 per cent. interest upon that amount, with the return of his capital unimpaired at his death, and to give an immediate present of £1000 to a hospital or to devote such a sum to any other desired object, may deduct £1000 from the £10,230, spend £4168 as a single premium to secure £10,230 at death, and with £5062 buy a life annuity of £307 which will give him interest at the rate of 3 per cent. on his original £10,230. Or, again, a man 40 years of age, instead of paying a yearly subscription to a hospital of £50, which may be taken as representing the interest upon £1688, can pay to the institution £1000 and to a life office £688, thus securing from the latter £1688 on his death. The variations which may be introduced into operations of this kind owing to the various forms of policy initiated by different life assurance companies are numerous, and Mr. SCHOOLING would call the attention of hospital committees to the advantages which they are capable of affording.

In considering these and other financial operations connected with life assurance and in comparing them with other possible plans which seem capable of bringing about like results, the most important point to be borne in mind is the very high degree of safety afforded by the sound pecuniary position of the great life assurance companies. Many methods of investment may seem to promise a more rapid increase of capital than they do, but none can be held to do so combined with the same security, a security which, be it remembered, is not affected by the premature death of the investor, but which, on the contrary, safeguards his survivors against the disastrous consequences of an event which none can foretell or avert.

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Remedial Measures against Plague in Hong-Kong.

THE report recently issued by Dr. W J R. SIMPSON on the Causes and Continuance of Plague in Hong-Kong contains a large mass of interesting information. It should also be an extremely helpful document to the Government for Dr. SIMPSON advises remedial measures with no uncertain voice and out of a great practical experience. The prevention of plague in Hong-Kong presents extreme difficulties inasmuch as the causes of the disease lie both within and without the colony, so that prophylactic measures to be effective must deal with both sets of factors. The whole of Southern China is more or less smitten with plague and the proximity of Hong-Kong to such an extensively infected area entails upon the colony considerable and permanent risk. The danger is increased by the fact that the population of Hong-Kong is largely derived from Kwangtung, upon which province Hong-Kong is mainly dependent for its food-supply. The population is constantly changing and numerous persons are frequently being brought to the colony from infected districts. No amount of precaution which is within the bounds of practicability can do more, therefore, than lessen the risk to the British colony so long as the empire of China takes no action to expel the disease.

But apart from the ever recurring infection from the Chinese coast, Dr. SIMPSON shows that plague is endemic in Hong-Kong itself. This endemicity is dependent upon several obvious causes. Firstly, it arises from infection among rats and pollution of the soil in rat holes. It has been found in Hong-Kong that there is nearly always an infection of the locality by plague-stricken rats before cases of plague occur among human beings. The insanitary condition of the interior of the houses is a second and most important cause. In the Chinese quarters of Hong-Kong the rooms are long and narrow and the lower floors are remarkable for their darkness; they are also frequently damp and densely overcrowded. The admission of sunlight into the dwelling-rooms is obstructed by the subdivision of the rooms into several compartments in accordance with the almost invariable Chinese custom. Each cabin is let to a separate tenant and not infrequently accommodates a whole family. A perpetual spread of plague is also brought about through the clothes of people who have died from plague. These are frequently surreptitiously removed before disinfection and taken to a healthy dwelling-place to constitute a new focus of disease. Lastly, the bodies of persons who have died from plague are commonly placed in the street and left there to be removed by the sanitary authorities. In this way not only does the body form a possible factor in spreading plague but another danger is added for the public—namely, the concealment of the infected houses. In order to guard against the importation into Hong-Kong of persons suffering from the disease and at the same time to combat the conditions naturally existing in the colony, Dr. SIMPSON has recommended to the Government the following measures: (1) notification of plague from China by weekly bulletins from consuls; (2) the inclusion of a special plague organisation in the sanitary administration; (3) a reorganisation of the sanitary department to include medical inspection of shipping and junks and the appointment of a Sanitary Commissioner for the Colony; and (4) the amendment and consolidation of the public health ordinances. He believes that with a trained and special organisation it will be possible to keep the disease in check and under control so as to prevent it reaching those dimensions which alarm the population, prove disastrous to the colony, and render Hong-Kong a source of anxiety to those who have trade relations with it. The preventive measures required are extensive and must involve an immense amount of labour. Amongst the first procedures to be adopted is a campaign against rats. The preparation and distribution of rat poison or of the Danysz bacillus must be arranged; the bacteriological examination of rats must be undertaken to discover which are infected so that the house or street from which the infected animals are brought may be detected; old, dilapidated, and rat-ridden houses must be rendered rat-proof; and ships must be inspected to insure that they possess the proper appliances to prevent rats passing from the ships to the shore or from the shore to the ships. Then as far as possible all concealed cases of plague must be traced and the patients removed to hospital; provision must be made of temporary accommodation for the healthy inmates of a plague-infected house; the cleansing and disinfection of such a house and all infected clothing must be undertaken; and, finally, emigrants must be inspected and their personal effects disinfected before leaving port.

Dr. SIMPSON states that the Government has already taken steps to organise a small but permanent staff trained in the work for carrying out the above duties. But he urges upon incontestable grounds that the sanitary administration of the colony requires to be placed on a wider basis in order that the complicated and serious health problems which always arise in a thriving and expanding commercial centre should be economically and successfully dealt with. He also remarks on the airy absence of responsibility that has hitherto prevailed and which, we may be sure, has counted for a good deal in the persistence of disease in Hong-Kong. "The most noticeable feature in regard to the sanitary matters of Hong-Kong is that no one is responsible," says Dr. SIMPSON, and he proceeds to make suggestions for altering this happy-go-lucky state of affairs. He recommends that all municipal health matters should be brought under one department, controlled by a sanitary or health commissioner who would be the administrative officer. We have said enough to show that there is more than ample work to occupy the whole time of such an officer and we hope that the appointment will be made at an early date. In addition to being president of the sanitary board the health commissioner would administer the several branches of the public health department dealing with the questions of water-supply, sewerage, and drainage, while he could also advise the Government upon the questions constantly arising in a community crowded with natives whose ideas of hygiene are extremely rudimentary. He would be responsible to the Government for the efficient working of the department and, like the director of public works, should have a seat on the Legislative Council. The general health of the community in a colony like Hong-Kong is of national importance and we trust that the Government will fully consider Dr. SIMPSON'S proposals and recommendations and speedily put into force the administrative reforms which he has advanced.

Cremation and Crime.

IT is not here our purpose to deal with the sentimental or other objections to the destruction of human remains by incineration; we merely wish to direct attention to facts which afford material for valid argument against the process recently provided for by Act of Parliament. In the first place it has been alleged that cases of simulation of death might occur and that persons in a state of suspended animation might have their lives extinguished by the means intended only for the destruction of their bodies. We have dealt with this question on former occasions and have pointed out that in the vast majority of instances there is no real foundation for the stories of premature burial or intended burial. No doubt in certain conditions—e.g., in the case of newly-born children—death may be only apparent and long-continued efforts at resuscitation will succeed in restoring such children to animation. But the chances of a living body thought to be dead being reduced to ashes are too infinitely remote, in our opinion, to merit serious consideration. Moreover, a living body is no more likely to be cremated than to be disposed of by the usual form of sepulture.

A far more serious objection to cremation is the possibility that a person may have been poisoned and that by burning the body the proof of the crime will be made to vanish for ever. During the trial of CHAPMAN, or KLOSOWSKI to give him his right name, at the Central Criminal Court the presiding judge took occasion to animadvert upon the Act recently passed by the Legislature. His lordship must either have been ignorant of the stringency of the regulations drawn up by the departmental committee appointed by the Secretary of State for the Home Department, or the grim facts of the cause just determined under his direction had unconsciously biased his judicial mind. Would it not be nearer the truth to say that had KLOSOWSKI applied for an order for cremation of the body of his first known victim the lives of the other women would probably not have been taken? His application would have led to his arrest. In the case of indestructible poisons the murderer who has knowledge of their properties may live in dread of the discovery of his crime, but would he not be in greater risk of that discovery were he to court inquiry of a most searching character by applying for an order for cremation? We do not believe with some that KLOSOWSKI'S long immunity from detection will in consequence of the recent law lead to an epidemic of murder by poisoning. On the contrary, we feel that his conviction at a time when impunity must have seemed probable will do much to check such crimes. Another reason which is advanced by the opponents of cremation is that an innocent person suspected of having administered poison with fatal results would by the destruction of the body be unable to disprove his guilt. One of the greatest of living authorities on medical jurisprudence—Dr. BROUARDEL—gives the weight of his opinion in support of this contention when he says: "There is here a real social danger and I should reproach myself if I did not lay stress upon it, especially with regard to the suspicions which may weigh indefinitely on an innocent person, incapable henceforth of proving his innocence" The possibility of such a catastrophe must be admitted and is the gravest indictment that can be drawn against cremation as a legally constituted procedure. Therefore to justify the measure it must be shown that unfounded suspicions of criminal poisoning are rare to a degree Care also must be taken that the regulations relating to cremation are so strict that only by the barest chance could there be a miscarriage of justice, although in the event of such miscarriage the partial evil is more than outweighed by the universal good, the individual mischance being eclipsed by the gain of the community.

As a means of combating disease, both by prevention and by effacement, cremation has certainly greater claims than earth burial. A virulent epidemic may be checked in its course and insanitation, due to the near proximity of graveyards to centres of dwelling and to the frequent renewals of burial in the same ground, would in great measure be removed. Taking an impartial survey of all the factors of an intensely interesting and difficult problem we feel compelled, though with some diffidence, to subscribe to the terms of the law which Parliament has seen fit to enact. We say this with all reverence for the sentiments of those who from long years of tradition have founded their faith, perhaps too literally, on the hallowed words, "earth to earth," and with full knowledge that the arguments against cremation are not all sentimental.

Annotations.

"Ne quid nimis."

THE BRITISH OPHTHALMIC HOSPITAL, JERUSALEM.

THE annual report of the Grand Priory of the Order of the Hospital of St. John of Jerusalem in England, just sanctioned for issue by the Chapter of the Order, contains, in addition to the usual detailed and important history of the ambulance work of the Order in England, in India, and in the colonies, the fifteenth annual report of the British Ophthalmic Hospital at Jerusalem, a charity which is maintained by the Order and is entirely under its control but for which contributions are sought from beyond its ranks. The hospital has lately been enlarged, at the cost of a single anonymous donor who stipulated that there should for the future be two resident surgeons instead of only one as heretofore, and it is now able to make up 50 beds, so that its power of providing for the enormous prevalence of eye disease, not only in Jerusalem itself but in all the surrounding country, is about to be greatly extended. The senior surgeon, Dr. W. E. Cant, has held his office with great distinction for about 12 years, during the last four or five of which he has had assistance during the busiest period of the year only, and he is now to be reinforced by Dr. T. Harrison Butler, an Oxford graduate and formerly Radcliffe Travelling Fellow, who assisted him during last summer and is about to accept a three years' engagement from the Order. The enlargement of the hospital and the increased number of beds and of in-patients will also render it necessary to engage more nursing aid from England, and the cost of maintenance is likely to be so seriously increased that the London committee is very desirous to enlist the sympathy and assistance of benevolent persons in this country who may be willing to assist in the good work which is being carried on. In truth, the magnitude and value of that work can hardly be overstated. It is a fundamental principle of the Order that no attempt at religious proselytism is permitted in the hospital and the result of this wholesome rule is that members of all the creeds in Palestine are to be found living within the wards in perfect harmony and practically learning the useful lesson of tolerance and of mutual help. Within these wards the most fanatical Mussulman learns to regard the Christian or the Jew only as a fellow sufferer and learns also that the Christian is actuated by no other than benevolent feelings towards his fellow creatures who differ from him in matters of belief. Universal testimony is borne alike by the Pasha of Jerusalem, by the Chief Rabbi, and by the Christian Bishop as to the absolute freedom and complete protection in respect of religion afforded to all creeds alike and as to the beneficial effect of this freedom and protection in bringing about the gradual growth of charity and of goodwill. The surgical report for the year ending Sept. 30th, 1902, gives the number of in-patients admitted as 674, the new out-patients as 6062, the total attendances on out-patients as 19,196, the operations as 1271, and those requiring anæsthetics as 680. A very large proportion of the operations are for changes in the form of the eyelids produced by trachoma and in dealing with these Dr. Cant is said to have attained an extraordinary degree of dexterity and of success. There were 62 extractions of hard cataract during the year and in addition to the familiar "Egyptian" ophthalmia, which is always abundant and in which the hospital is continually rescuing sufferers from loss of sight, the out-patient department presented nearly every form of affection which is met with in this country or in Europe. The result of its work is that the doors of the hospital are not only besieged, often before daylight, by great numbers of the poorer residents in Jerusalem itself, but also by the fellaheen from all parts of the Holy Land, many of whom make long journeys for the sake of a single consultation. It would be impossible for English charity or English skill to have a better representative in the East than the hospital affords and its work, material as well as moral, is deserving of every possible assistance. The headquarters of the London committee are at St. John's Gate, Clerkenwell, at the Chancery of the Order, where information about the hospital will be promptly given and donations in aid of it will be gladly received.

THE RELATION OF LEPROSY TO THE USE OF FISH AS FOOD.

IT is generally known that Mr. Jonathan Hutchinson has recently made a tour in India for the purpose of obtaining information bearing upon the hypothesis which assigns a foremost position to the use of unwholesome fish as food in the etiology of leprosy. A short account of the results of his inquiries has appeared in the *Times*, but we presume that this is merely a preliminary notice and that fuller information will be forthcoming. Mr. Hutchinson's general conclusion is that as regards leprosy in India there are no facts which controvert or render untenable the fish hypothesis and that there are some which afford to it a support which he considers to be unassailable. The commission which, 12 years ago, was sent to India to investigate the whole subject of leprosy gave careful attention to this point and, while fully admitting the plausibility of the fish hypothesis, finally rejected it on the ground that a considerable number of lepers in the asylums of India alleged that they had never eaten fish. Dissenting from this conclusion and believing that the statements of alleged facts to which the commission had trusted were in some respects erroneous, Mr. Hutchinson wished to go over the ground again and to examine these contentions more critically. He visited many of the leper asylums and elicited much interesting information. He likewise maintains that he has exposed many fallacies which would easily mislead the members of a commission unless care was taken personally to verify the documentary evidence. For instance, in one asylum in the Punjab a tabulated schedule had been prepared for Mr. Hutchinson by the native medical superintendent, according to which nearly 40 men alleged that they had never eaten fish. Mr. Hutchinson questioned them one by one with the result that only one man persisted in the denial. In the account before us many examples are given which, Mr. Hutchinson considers, afford strong support to the fish-eating theory To give an example. The Ceylon waters are much less productive of fish than those of the Indian coast and of certain groups of islands. In Ceylon the incidence of leprosy is less than two per 10,000. On the little island Minicoy, closely adjacent, which exports fish and where the inhabitants are said to have four fish meals a day, the proportion is possibly little short of 150 in 10,000. Mr. Hutchinson as the result of inquiries made last year in South Africa is convinced, however, that it is an error to attempt to apply the fish hypothesis exclusively, since in a certain small number of cases it seems certain that the disease may be conveyed by eating food directly from the hands of a leper or by receiving in any other way the pathogenic bacillus by the mouth; hence he concludes from his observations that whilst fish-eating is the invariable originating cause of leprosy it is not the sole cause of its prevalence. Having once originated in a community it may possibly spread to some slight extent by what Mr. Hutchinson calls "commensal communication." It will be observed that the above remarks apply mainly to leprosy as existing in India. A meeting will be held at the Polyclinic on Friday next, May 15th, at 2.30 P.M., Lord George F. Hamilton, Secretary of State for India, taking the chair, when Mr. Hutchinson will report the results of his tour. Discussion will be invited and an interesting debate is to be expected.

THE POTENTIALITIES UNDER THE PAVEMENT.

EVIDENCE has been forthcoming on more than one occasion that the roadways and pavements of London need to be disturbed with some care, for there are forces locked up there which bad management might easily release with disastrous results. It is enough to make the nervous pedestrian shudder when he realises that within a few inches below him are electric cables of 10,000 voltage in close proximity to high-pressure gas mains. Near these, again, is the water main the escape of water from which is calculated to rot the insulator of the cable or the joints of the gas conduit. Some alarm was created in the Strand last Sunday in the neighbourhood of the building operations being carried on near the Savoy Hotel by the occurrence of a subsidence of a considerable area of ground which involved the pavement, and a four-inch gas main and three electric cables were exposed to view and submitted to a dangerous degree of twisting. The subsidence proceeded for some hours and the danger of the situation was increased by the fact that being Sunday there were no workmen at hand to give assistance. Eventually it was discovered that the collapse was due to a load of bricks which weighed about eight or nine tons pressing upon the roof of some obsolete cellars and it is reported that the whole neighbourhood is honeycombed with cellars of an ancient date. The bricks were removed as quickly as possible and thus all danger was averted but not before a considerable escape of gas had taken place. It seems incredible that such big building operations should have been conducted before the honeycombed condition of the foundations was ascertained. It appears to us that the contractors must have exhibited great carelessness or misjudgment in not having taken steps to provide that the ground destined for building operations was firm enough to stand the weight of a load or so of bricks. In these days of all sorts of potentialities beneath the pavements the greatest care needs to be exercised in order that the paths of gas, water, and electricity may not be interrupted, for in the absence of such care disaster may readily ensue.

THE PREVALENCE OF SMALL-POX.

THE Local Government Board for Scotland intimates that during the period from April 16th to 30th inclusive 1 case of small-pox has been notified to it—viz., from the parish of Peebles. Small-pox continues to spread chiefly in the Midlands and in the North of England. With regard to Liverpool Mr. Weir, M.P., has given notice that he will ask the President of the Local Government Board whether he is aware that during the last six months there have been some 1400 cases of small-pox and 90 deaths and whether he will consider the desirability of appointing one of the Board's medical inspectors to inquire into the measures which are being adopted by the health authorities to cope with the disease. At Leicester on April 30th there were 90 cases of small-pox under treatment, while cases are still being reported from Nottingham, Coventry, Manchester, and Cardiff, and at midnight on May 3rd there were 48 cases under treatment in the hospitals of the Metropolitan Asylums Board. In Dublin the total number of cases notified last week was 25. Difficulties arise from concealment of cases and last week nine cases so concealed were discovered. We notice that Mr. J. Byrne Power, medical officer of health of Kingstown, states in his April report: "What has been accomplished in Kingstown as regards both primary vaccination and revaccination has been mainly owing to the coöperation of the Catholic clergy." We commend the example of their Roman Catholic brethren to the clergy generally.

"PSEUDO-VARIOLA."

WE have recently received a small brochure which is dated August, 1901, and is not without interest in its bearing on the question at issue between Barbados and Trinidad to which we referred in a leading article in THE LANCET of May 2nd, p. 1248. For it deals with the "eruptive skin disease" which the authors say "has been prevailing extensively in many parts of the United States for the past three years," and therefore was doubtless the same varioloid epidemic which afterwards prevailed in Canada and later in the West Indies. The authors are Dr. Simonton, Dr. Sloan, and Dr. Porter, who give their experience of this "highly infectious" disorder as it appeared in the far west in 1900-01 in the mining town of Roslyn, Washington, situated about 2500 feet above the sea level. Here in a small community of 4000, not one in ten of whom had ever been vaccinated, this disease spread to such an extent that 1500 cases were observed. Not one of these cases was fatal and the writers confess that if it had been true small-pox such a result in an unvaccinated community would be without a parallel. They argue that, similar as it was to variola vera in some of its features, it differed in others and ask why it should not be regarded as a distinct affection, as distinct as rötheln is from measles, or pseudo-diphtheria from diphtheria. A large number of the cases, especially in children, were of a very *mild type—there being no premonitory symptoms*, while there was a scanty papular rash which became vesicular but never pustular. In the more severe cases there was premonitory fever preceding the eruption of the papules on the face and the trunk which, like varicella, appeared in "crops," and the vesicular stage assumed a semi-confluent or confluent character. But no pustulation or pitting occurred except in cases where the vesicles had been irritated by scratching. Nor did any complications or sequelæ arise. The affection which they thus describe is certainly very similar to many of the cases observed lately in Trinidad, but not to those which, according to Mr. J. F. E. Bridger, more nearly resembled true variola. The experience of Roslyn, too, was like that of Trinidad in that quarantine could not be carried out and infection was freely disseminated. Dr. Simonton, Dr Sloan, and Dr. Porter further aver that not only did the unvaccinated children exhibit the disease in its mildest form, but that in the few cases in which they persuaded the people to be vaccinated this measure had no appreciable effect in preventing the disease and vaccination was successfully performed in those who had recently convalesced They add, somewhat significantly it seems to us, that Roslyn, unlike some other towns of the United States, perhaps owed its freedom from fatalities to the fact that no cases of true small-pox were mingled with those of this "pseudo-variola"—thus emphasising the distinction upon which much stress has been laid in Trinidad that if such a disease were small-pox it *must* be more fatal than has been the case in these outbreaks. Since there is apparently no very marked criterion other than this of mildness of type to distinguish the "true" from the "false" disease, it would seem to be incumbent on sanitary authorities to be as vigilant in their preventive measures in the one case as in the other—until, at any rate, it be more plainly established that a new disorder is to be added to the nosology.

CLAY-MODELLING IN THE STUDY OF OSTEOLOGY.

In the March-April number of the *Bulletin of the Johns Hopkins Hospital* Dr. Robert O Moody of the University of California describes the method of clay-modelling which all the students in the osteology class of that university have to learn in addition to making drawings of the bones of the skeleton The necessary apparatus consists of a board and two modelling tools The board should be a piece of smooth kiln-dried wood, about 24 inches long, 20 inches wide, and three-quarters of an inch thick. It is well to have it coated with boiling paraffin to prevent the clay from sticking or the board from warping. The best potter's clay is used after having been passed through a sieve and homogeneously mixed with water. The model of each bone should be completed while the clay is still in a plastic condition ; it is not desirable to let the clay harden and afterwards to carve and to finish the model. The amount of time given to this work is about 24 hours a week for seven weeks. During the first week the clavicle, scapula, and sternum are modelled, and during the second week the humerus, radius, ulna, and ribs.

THE TREATMENT OF INCIPIENT MENTAL DISEASE.

In his presidential address, delivered on March 2nd at the annual meeting of the New Zealand Branch of the British Medical Association (an account of which by our New Zealand correspondent will be found at p. 1341 of our present issue), Dr. S. A. Gibbs of Nelson gave an outline of what would undoubtedly constitute a great improvement in the treatment of cases of incipient mental disease. He said that facilities ought to be provided for those who might, and would, offer themselves for treatment in institutions if the stigma at present attaching to the idea of a lunatic asylum could be avoided. Voluntary admission of mental sufferers into places suitable for their reception was possible in some countries, but no such system existed in New Zealand except for one special class of the mentally afflicted—namely, the dipsomaniacs. The principle was thus admitted to a certain extent and he thought that the benefits obtainable in this way might be made accessible to a larger class of cases by centralisation of the control of the general hospitals and asylums under the Department of Public Health. Incidentally he gave credit to the Government for having established this department, which was doing valuable work as was also the pathological laboratory under Mr. Gilruth. Central control would allow the scope of the general hospitals to be widened and would allow nurses to obtain special training at the asylums in mental diseases, and by transfers each general hospital could be provided in time with nurses who had received this special training. The amalgamation suggested might also be followed by the establishment of a New Zealand staff of hospital nurses, which would be a step in advance, and the central authority could then arrange for the transfers necessary to secure the special training. Dr. Gibbs gave instances where incipient insanity had been successfully dealt with by timely care and emphasised the point that under present conditions there was a natural disinclination on the part of the patient and his friends to incur the stigma which committal to an asylum involved. Dr. W. E Collins, in moving a vote of thanks to the President for his address, said that for some years he had been of the opinion that there should be an intermediate establishment between the hospital and the asylum for the mentally diseased and he protested against the use of the terms "lunatic" and "asylum." It was monstrous that those who were diseased mentally should be classed as lunatic and a reform was needed ; the term "hospital for the mentally diseased" would lessen the stigma in many minds. He also considered that the practice of taking patients to the police cells for examination had a deterrent and prejudicial effect on patients and friends and was unnecessary. Dr. James Mason, chief health officer, who seconded the motion, said that medical practitioners themselves were a good deal to blame for sending to the asylums persons who should not be there—old persons who should be found in the "ingle nooks" of their families. By reason of the large number of such persons sent into asylums the very reforms asked for were rendered impossible and the fault of the non-provision of such establishments as were now suggested did not lie altogether with the Government.

POOR-LAW MEDICAL OFFICERS IN THE HIGHLANDS AND ISLANDS OF SCOTLAND.

The parish council of Barra recently advertised for a medical officer and public vaccinator. The salary offered was £119 and as a further inducement other appointments were allowed to be held and private practice was allowed to be taken. We have upon various previous occasions reminded our readers that no Poor-law medical post should be taken under the Scottish Poor-law unless assurances have been obtained from the parish council regarding fixity of tenure, adequate salary, a free official residence, and a free annual holiday—i.e., payment of a locum-tenent. With regard to the appointment under consideration, Barra is an island in the Hebrides and the parish includes several other islands which are sometimes difficult of access. It will also be remembered that a Scottish parish council has the right to dismiss its medical officer without giving any reason and in 1898 the parish medical officer of Barra was so dismissed, as may be seen in a return applied for by Mr. Weir, M.P., and ordered by the House of Commons to be printed on August 8th, 1902.

AUTOMATIC COUPLINGS ON RAILWAYS.

On Wednesday, April 29th, a lecture was delivered at the Society of Arts upon Automatic Couplings, in the course of which the lecturer stated that since the year 1872 some 30,000 railway servants had been injured or killed while they were coupling or uncoupling wagons on the railways of the United Kingdom. On the previous Wednesday, April 22nd, the question was raised during the discussion of the estimates for the Board of Trade. This department is a kind of Government whipping-boy, or, to quote Mr. Gibson Bowles, its good deeds and its bad deeds extend over almost every department of modern life. So far as we can see every industrial trouble which arises is laid at the door of the Board of Trade but we are bound to say that this department does not make as much use as it ought to of the powers intrusted to it. Mr. F. W. Evans, formerly secretary of the Amalgamated Society of Railway Servants, in a letter to us concerning automatic couplings, refers to Mr. Gerald Balfour's speech in the House of Commons on the matter. Mr. Balfour implied that no really satisfactory form of automatic coupling had yet been invented. Perhaps not, but we should have thought that out of the very numerous forms of automatic coupling which have been invented, and we believe there are some 1500, there must be one which would lessen the risks undergone by shunters. We are quite aware that railway directors have to look after their shareholders' interests and that many poor persons draw the whole of their income from investments in railways, but still we believe if the directors of any company were to appeal to their shareholders and to say—Will you agree to your dividends being slightly reduced in order that we may make a beginning in substituting automatic couplings for those in use?—that no shareholder would refuse. Mr. John Ellis, in the debate in the House of Commons, referred to Mr. Ritchie's Railway Employment Prevention of Accidents Act, 1900, and asked why the Board of Trade had not carried out the powers given to it under that Act. Mr. Gerald Balfour replied that the Board had done what it could. All we can say is that the Board had better try to do a little more We are quite aware that very often workmen will not use life-saving improvements—e.g., the case of the Sheffield grinders and fans, respirators, and the like—but all the same the companies should endeavour to lessen the present risks to life.

A SURVIVAL OF "SIGNATURISM."

THE practice of rice- or starch-eating referred to in THE LANCET of April 25th, p. 1186, is not peculiar to Tyneside, and indeed seems to be universal throughout England. It is certainly often met with in Hampshire villages, where it is no unusual thing for a young woman of the humbler classes who is bent, as the phrase goes, on "looking interesting," to make herself very ill with starch-eating, the eating of tea-leaves, vinegar-drinking, and so forth. Starch, blue or white, is supposed to act like arsenic, clearing rather than rendering pale the complexion; at least, this is the opinion of villagers. Doubtless this pernicious custom, which may account for much of the anæmia of domestic servants, can plead a respectable antiquity. It is certainly too old to have been learnt in the fashion columns of modern journals. It is probably older than those false ideals of female beauty which prevailed in the beginning of the last century and in the eighteenth century when tight-lacing, sloping shoulders, and various kinds of etiolation, abnormally small hands and feet, fainting fits, and an unhealthy pallor were thought to be elegant, and when dandies such as Lord Byron drank vinegar and starved in order to combat a tendency to obesity. Rice- or starch-eating is in all probability the original of all these practices and may be said to be derived from the "signaturism" of the Middle Ages, which prescribed a medicine made from a white substance as a means of producing pallor. In the seventeenth century Sir Kenelm Digby was famous among the fair sex for his "cosmetic or beautifying water," the chief ingredients in which were six drachms of white lilies, orris roots, white lead, fine sugar, white bread crumbs soaked in milk, borax, alum, camphor, the white of an egg, and other substances, doubtless also white in appearance. In France, during the same period, the Queen of Louis XIV. used a somewhat similar mixture, which, when well shaken up, resembled milk. Its chief ingredient was, however, water "that runs from under the wheel of a mill." Both these famous cosmetics were used externally only.

THE DISTRIBUTION OF PLAGUE.

As regards the Cape Colony the acting medical officer of health states that for the week ending April 4th the condition of the various places mentioned below as regards plague was as follows:—At the quarantine station, Saldanha Bay, 2 patients still remained under treatment in the hospital. The s.s. *Nerasa* was granted a clean certificate and was permitted to sail on March 30th. At Port Elizabeth 2 cases of plague were discovered—namely, 1 native male who was admitted to hospital on March 31st and died on the following day, and 1 native female who was found dead on April 3rd. At the plague hospital, Port Elizabeth, 8 patients were discharged recovered during the week, leaving 15 cases under treatment. Plague-infected rats continued to be found in the town during the week. At East London 2 further cases of plague were discovered, namely, 1 Indian male who was discovered on March 29th, dying on the same day, and 1 native male on the 30th. Two patients remained under treatment at the plague hospital. Plague-infected rats were found in the town during the week. 3 patients remained under treatment at the plague hospital, King William's Town, and plague-infected rats were discovered in the town during the week. At Graaff-Reinet no cases of plague and no plague-infected rats were discovered in the town during the week. As regards Hong-Kong, a telegram from the Governor received at the Colonial Office on April 28th states that for the week ending April 25th there were 79 cases of plague and 72 deaths. As regards the Mauritius, a telegram from the Governor received at the Colonial Office on May 1st states that for the week ending April 30th there was 1 case of plague which proved fatal.

THE X RAYS IN LYMPHADENOMA.

RADIOTHERAPY is so new that probably only a small part of its utility is known. The remarkable results obtained in lupus and in some forms of malignant disease raise the hope that it may prove valuable in many other conditions. In lymphadenoma some diminution of the enlarged glands has been reported by Dr. Pusey[1] but, so far as we know, no such complete observations as the following ones published by Dr. N. Senn of Chicago in the *New York Medical Journal* of April 18th have been recorded. A man, aged 43 years, had extensive enlargement of the cervical, axillary, and inguinal glands and of the spleen. The disease began with cervical enlargement 12 months before. He was anæmic and the blood contained no abnormal cells. Arsenic and iron were prescribed and on March 7th, 1902, daily exposures to the x rays were begun, one minute each being allowed for the right side of the neck, the left side of the neck, the neck from before backward, the neck from behind forward, each axilla, each groin, and the spleen. A current of 60 volts and eight ampères was used with a tube at a distance of 12 inches from the surface. On April 7th the glands were diminished and the chest was red and pruriginous. The current was reduced to 42 volts and six ampères. Six days later the voltage was reduced to 28. Blisters formed on the chest and the neck, naturally dark, turned dark brown. From April 16th to 23rd the exposures had to be confined to the neck, back, and groins, as the chest was the seat of extensive burns. On the 24th all the glands exposed to the rays had nearly disappeared and the hair on the part of the head exposed and in the axillæ and on the pubes had fallen off. The neck was blistered and the nipples were discharging pus. The treatment was suspended. Two weeks later the patient was much improved and was able to return to business. No enlarged glands could be discovered. When seen again on August 1st he felt well but had recently noticed slight enlargement of the cervical and axillary glands. The enlarged glands were treated by exposures of two minutes (for each group), with a current of 28 volts and six ampères, and the swellings promptly disappeared. No relapse has since occurred and the patient is in perfect health. In a second case a man, aged 53 years, was seen in the spring of 1902. Ten years before he noticed slight enlargement of the cervical glands and then the tonsils became swollen and painful. A little later the glands in the back of the neck, the axillæ, and the groins were affected. Arsenic, iodides, and cod-liver oil appeared to be useless. To regain health he lived an out door life in the mountains. After a year the glands were softer but not smaller. The appetite improved and weight was gained. The glands further enlarged until some of the cervical ones reached the size of a hen's egg. On examination the neck was bulging from glandular enlargement and a chain of glands extended from the axillæ to the epitrochlear regions. Some of the trochlear glands had reached the size of a chestnut. The inguinal glands were greatly enlarged. A gland of the size of a hen's egg was felt in the abdomen to the right of the umbilicus. The liver was palpable below the costal arch. The spleen was enlarged but not palpable. The tonsils were enlarged. Examination of the blood showed hæmoglobin 73 per cent. and erythrocytes 3,875,000 and leucocytes 208,000 per cubic millimetre. The leucocytes consisted of small mononuclear lymphocytes 78 per cent., large mononuclears 14 per cent., transitional forms 2 per cent, and polynuclears per cent. The x rays were applied to the affected glands on each side every alternate day, from five to seven minutes being given to each part. After four or five sittings the patient noticed softening and diminution of the glands. After 15 sittings there were slight dermatitis and symptoms of toxæmia. The patient lost appetite and the anæmia increased. The treatment was suspended. Three weeks later his health was much improved and he had gained 11 pounds in weight. The glands were much diminished and the skin which had been exposed to the rays was pigmented. Examination of the blood showed hæmoglobin 85 per cent. and erythrocytes 4,450,000, and leucocytes 76,000 per cubic millimetre. Exposures of seven minutes were given. After 12 sittings there were slight dermatitis, pigmentation, and loss of hair, and toxic symptoms more pronounced than after the first series of applications. Only one small gland could be felt above the right clavicle and one behind the sterno-mastoid muscle. The axillæ were normal and the inguinal glands had almost disappeared. The leucocytes were 46,500 per cubic millimetre. The spleen extended to within a finger's breadth of the iliac crest. The constitutional disturbance which accompanied the diminution of the glands is ascribed by Dr. Senn to absorption of the products of their degeneration. The patient has written recently that he is in perfect health and that there are no signs of relapse. The remarkable success of the x-ray therapy in these cases certainly indicates its trial in a disease but little amenable to treatment.

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[1] Journal of the American Medical Association, April 12th, 1902, p. 911.

ELECTRICITY AND THE FOOD PROBLEM.

ELECTRICITY would appear to have something in common with the forces of plant life and it is just possible that some day the world's food-supply will be furnished by its means. Already we know that when intense electrical discharges occur in air nitric acid is produced which, when neutralised with soda, potash, or lime, furnishes the indispensable nitrate for plant life. At the present moment the Falls of Niagara are being utilised in this way. But apparently electricity is capable of producing food substances in a much more direct way than this. Given carbon, hydrogen, and oxygen in the simple association existing in carbonic acid gas and water, the current under certain conditions will bring about, according to recent researches, a re-arrangement of the elements until at length carbohydrates are obtained. It is stated that by merely passing a current of definite potential through soda water or water impregnated with carbonic acid gas a series of products is formed culminating in sugars. First of all is formed oxalic acid, then tartaric acid, next citric acid, until at five volts and three ampères grape sugar appears. If these things are true no more wonderful or astonishing discovery could be imagined. Carbonic acid gas and water are abundant enough throughout the whole world and to convert these simple substances into complex foodstuffs, for the supply of which we have to look to far countries, by simply manipulating them with the electric current, surely promises to bring about one of the greatest revolutions in the history of the world. But we have to reckon with nitrogen, the essential element of the proteid or flesh-forming portion of all food. As its Greek derivation implies (τὰ πρωτεῖα, pre-eminence), proteid is a vital constituent of all food, and it has been said "without proteid we die." Is it possible, then, that proteid will eventually be built up by electrical means in the same way as is carbohydrate? In such case plant life will no longer be indispensable to man. Though at present proteid cannot be constructed directly, yet the production of nitrate by electricity is a source of stimulus to the synthesising process of the plant and therefore electricity comes again to our aid in the production of food. As to the mineral salts of food, they again are essential; but then, of course, chemistry has long since furnished us with material for their production. It seems clear that the chemist and physicist are unfolding nature's ways with a rapidity which is startling considering that what they have already achieved amounts to saying that given an abundant supply of chalk, air, and water the food problem is solved. The ingredients of the formula are in truth plentiful enough, but what a dismal world when plant life is no longer necessary to the human race.

DOES MERCURY CAUSE TABES?

DR. PAUL COHN refers in the *Berliner Klinische Wochenschrift*, No. 10, 1903, to the question which is still regarded as debateable—viz., as to whether mercury administered for the treatment of syphilis is a likely agent in the production of tabes dorsalis. He gives an account of his investigations in regard to this point on 117 cases of tabes, comprising 86 males and 31 females. The histories of these patients were carefully inquired into as regards the date of syphilitic infection and the period, if any, through which they had undergone mercurial treatment. Of the 117 patients 43 males gave a distinct history of syphilitic infection; 15 of these had never been treated with mercury, while the remaining 28 patients stated that they took very small doses of the drug and only for short periods of time. In no case had a syphilitic patient undergone a thorough, prolonged, and systematic mercurial treatment for his illness. Of the 8 male tabetic patients 63 had thus never undergone mercurial treatment at all. Considering therefore the large proportion of the latter, and having regard also to the fact that the few patients who did undergo mercurial treatment took the drug in small quantities and only for brief periods, Dr. Cohn concludes that tabes dorsalis could not be regarded as due to the toxic or cumulative effect of mercury. Of the 31 female tabetic patients five only had been treated with mercury. The exact proportion of syphilitic cases among the women was difficult to ascertain, but the fact that symptoms of syphilis had been present in many of them without being suspected at the time was conclusively proved by careful inquiries into their history. Many of these suspected cases were characterised by the usual symptoms of syphilis, such as sore-throat, and occasionally also a roseolous rash was said to have developed, while still-births were noted to have been of frequent occurrence The total body of evidence collected from both male and female cases tended to support the conclusion that mercury was not a cause of tabes dorsalis. Among the patients there were a few who did not reveal signs, symptoms, or a past history of syphilis, but several of them, adds Dr. Cohn, had suffered from severe illnesses, such as typhoid fever and influenza, prior to the commencement of tabetic symptoms. Dr. Cohn therefore believes that while the predominant rôle in the production of tabes dorsalis must be assigned to syphilis other toxæmic agents (infective fevers) may also play a part in bringing about tabetiform degeneration of the spinal cord but that mercury plays no part in the production of tabes or in accelerating its course when established.

THE CHEMICAL CHANGES IN THE BLOOD IN CHLOROSIS.

AN interesting contribution to our knowledge of the chemical changes in the blood of chlorotics is given by Dr. Franz Erben of Vienna in the *Zeitschrift fur Klinische Medicin,* Band xlvii., Hefte 3 and 4. The blood of three chlorotic patients was examined by Hoppe-Seyler's method for organic substances and the ash was analysed according to Bunsen's method. Dr. Erben found in addition to the universally recognised reduction of the percentage of hæmoglobin, which in his cases ranged from 30 to 52 per cent. of the normal, that the fat in the serum was strikingly increased, which accords well with the tendency to the deposition of fat in chlorotic girls. The proportion of lecithin, on the other hand, was somewhat diminished in all three cases and the proteid substances in the two which were more severe were reduced about 1 per cent, the proportion of albumin to globulin being normal and the fibrin somewhat increased. As far as the inorganic constituents were concerned Dr. Erben found that the potassium, iron, and phosphoric acid were diminished and the calcium and magnesium were increased.

TREATMENT OF THE MORPHIA HABIT BY SUDDEN WITHDRAWAL OF THE DRUG.

IT has generally been held that in the treatment of patients suffering from the morphia habit abrupt withdrawal of the drug is liable to produce dangerous symptoms of collapse and physical prostration, and hence the commonest method adopted has been to diminish the habitual daily dose of the patient in such a manner that the quantity was reduced to zero in from two to three weeks' time. This method of "tapering off" the use of the drug has been recommended by eminent authorities, such as Mattison of Brooklyn and Erlenmeyer of Berlin. In the *New York Medical Record* of April 11th Dr. Margaret Halleck of the New York State Reformatory for Women gives an interesting account of the successful treatment of five female patients who were admitted to the institution for treatment of the morphia habit, the method adopted in each of these cases being that known as the "sudden withdrawal" of the drug. These patients were, however, given daily injections of other alkaloids to combat prostration and collapse and the results as recorded appear to have been uniformly successful "As each patient came under care," adds Dr. Halleck, "I endeavoured to win her confidence. ...... I told her frankly that no morphia would be administered but that she would not be allowed to suffer much" Personal interest was shown in every case and strong mental "suggestion" of improvement was freely used. The following two cases may be taken as typical of the methods of treatment followed and of the results obtained. Case 1 was that of a woman, aged 24 years. The morphia habit was contracted while she was under treatment for a broken leg. She finally took from six to ten grains of morphia daily, besides smoking a "dollar's worth of crude opium." On admission she suffered from sleeplessness and attacks of vomiting, her pupils were dilated, the extremities were cold and perspiring, she was aching all over and was in a very nervous condition. The following preparation was used for treatment—viz., $\frac{1}{30}$th of a grain of strychnine sulphate, a quarter of a grain of codeine sulphate, and $\frac{1}{200}$th of a grain of hyoscine hydrobromate in sterile aqueous solution. This was injected hypodermically every night with the suggestion that she would sleep well. Sleep improved day by day, the pain and attacks of vomiting disappeared, and at the end of a week there was marked improvement. The daily injection was then limited to strychnine only ($\frac{1}{30}$th of a grain) for another week, after which all medication was stopped. Her weight on admission was 99 pounds. In six months she had gained 30 pounds in weight. She remained in the institution for a year and then left quite recovered from the habit and has continued well since then without relapsing. Case 2 was that of a woman, aged 24 years, who was taught the use of morphia by an older woman. She had taken morphia hypodermically for seven years, her dose being eventually from 50 to 60 grains per diem. On admission she was very emaciated and weighed only 90 pounds. She was nervous and agitated, her pulse was slow, the pupils were dilated, and the bowels were constipated. Treatment similar to that adopted in Case 1 was followed with good results. Her appetite and sleep improved, she gained weight to the extent of 20 pounds in six weeks, and was discharged as recovered. Of the five patients whose histories are recorded two smoked opium for several years and the other three took morphia hypodermically or by the mouth. All these patients seemed to have lost their craving for the drug after having undergone treatment. The combination of strychnine, codeine, and hyoscine is highly recommended by Dr. Halleck for its excellent adjuvant effects in promoting the recovery of the patient and in obviating the physical prostration which would otherwise follow upon sudden withdrawal of the drug.

SUNDAY TESTING.

WE trust never to see Sunday abolished in general as a day of rest, but in these modern times it is perfectly obvious that it cannot be always a day of rest for everybody and therefore to some extent a breach of the Lord's Day Observance Act is of constant occurrence. The milkman must go his rounds on Sunday, a limited number of trains must be run, a single post at any rate must be collected, the gas-, electric-, and water-supplies must be maintained, and so on. But should the machinery be stopped on Sunday which controls the quality and purity of the food-, gas-, or water-supply? In an action heard in the Chancery Division this week a metropolitan gas company expressed the opinion that it should and refused to admit the gas examiners to the testing stations on Sundays. For 40 or 50 years, it was urged, the London County Council and its predecessors had tested only on week days and that put an interpretation on the Act which prevented the County Council from carrying out its duties on Sundays The County Council, however, concluded—and rightly, we think—that "it is never too late to mend" and recently had taken up the matter of testing the gas on Sundays. We do not understand the gas company's position, as surely it is just as important to have a pure and efficient gas-supply on Sunday as on any other day. Some years ago it was discovered that certain milkmen took advantage of the inspector appointed under the Sale of Food and Drugs Act taking his, no doubt well-earned "day of rest," for when samples were secured on a certain Sunday there was found to be a remarkable rise in the number of cases of adulteration. In some instances the extent to which watering was carried on was disgraceful. We trust also that samples of the metropolitan water-supplies are taken on Sunday, as any neglect of that matter on any single day might conceivably inflict on London a severe epidemic. In short, it is of the utmost importance that control should be exercised in regard to those public supplies which of necessity are maintained on Sunday. The fact that it is the official's day of rest has tempted the unscrupulous to do on that day what they dare not do on a week day. The words of Mr. Justice Joyce in the case of the gas company mentioned above, "that he did not even suspect that the legislature did not intend that which was provided by the Act—namely, that the testing should be daily and every day, without excepting Sunday in any way whatever"—should apply in every case where the purity and efficiency of a daily need are concerned. The public has a right to be protected on Sunday just as much as on any other day, and so someone must occasionally forego the day of rest, but, of course, he should be compensated.

THE FESTIVAL DINNER OF THE ROYAL MEDICAL BENEVOLENT COLLEGE.

WE understand that the festival dinner of the Royal Medical Benevolent College, at which His Royal Highness the Prince of Wales will be in the chair, bids fair to be a great success. Among the list of stewards occur the names of gentlemen important in such different walks of life as the Prime Minister, Prince Louis of Battenberg, Sir Thomas Bucknill, the Archbishop of Canterbury, Sir Michael Foster, Lord George Hamilton, Sir Trevor Lawrence, Lord Lister, Sir J. N. Lockyer, Field-Marshal Sir Henry Norman, and the Earl of Rosebery. We cannot find space to mention the names of the many well-known medical men who are supporting the Prince of Wales as stewards.

STRUCTURE OF THE CHIASMA IN THE RABBIT.

THE disposition of the fibres of the optic tracts and optic nerves in the chiasma in rabbits has lately been made the object of study by Dr. Burton D. Myers who has published his results in the *Archiv für Anatomie und Physiologie* of His and Engelmann.[1] The majority of the sections were so made as to include with the chiasma a portion of the optic nerves and of the optic tracts. Nearly all the sections were stained with Weigert's hæmatoxylin and preserved in alkaline Canada balsam and they were obtained from animals that were not more than 12 hours old. The following are the conclusions at which Dr. Myers has arrived. The decussation of the fibres of the optic tracts in the chiasma is only partial in the rabbit. The non-decussating fibres are few and do not form an isolated or separate tract. The decussation is formed by an interweaving of fasciculi and not of fibres, differing in this respect from the chiasma of the toad. In the rabbit vision is binocular. It is impossible, with the present methods of investigation, to estimate the number of fibres in the optic nerve with any degree of precision. In the caudal angle of the chiasma there is only one commissure, the commissura inferior, which was named by Hannover the "commissura arcuata posterior." This commissure in horizontal sections was named by Gudden "Meynert's commissure" and as seen in transverse sections the "commissura inferior," so that it appears that two names have been applied to the same fasciculus and, similarly, the term "Meynert's commissure" has been applied to two different fasciculi. In this inferior commissure or decussation medullated fibres begin to appear on the second day and the medullation is completed on the seventh day after birth. In the "decussatio subthalamica anterior" of Ganser, or "Forel's commissure," there are two independent fasciculi separated from each other by an interval of five days in the process of medullation of the fibres, although their course in the central grey substance differs to so slight an extent that they seem to constitute only one strand. The anterior or rostral portion ought to be named, says Dr. Myers, the "decussatio superior" in opposition to the "commissura" or "decussatio inferior," whilst the caudal or posterior part should henceforward be designated the "decussatio subthalamica anterior." The decussatio superior, which occupies a lateral position in the optic tract, first becomes medullated on the second day after birth. After crossing the median plane it probably terminates, as stated by Lenhossek, in the anterior nucleus of the optic ganglion. The decussatio subthalamica anterior, which embraces the fornix, presents medullated fibres on the seventh day. It probably ends in the nucleus supra-opticus (Lenhossek) of the basal optic ganglion. The optic nerve of the rabbit contains at the end of the first day comparatively few medullated fibres; on the fifth day there are several hundred fibres and all the fibres become medullated between the seventh and the ninth days.

CORONER'S INQUESTS AND REPORTS OF POST-MORTEM EXAMINATIONS.

AT the commencement of the year the following letter from the coroner of the borough of Cambridge was received by all the medical practitioners residing in his district:—

"*RE* INQUESTS."

15, Corn Exchange-street, Cambridge, Dec. 31st, 1902.

DEAR SIR,—Hitherto it has not been the practice for medical practitioners to send me the result of P.M. examinations. I have received verbal reports at the time of the inquests only. This has in some instances proved somewhat inconvenient. With the commencement of the New Year I therefore desire that a report be sent addressed so as to reach the police-station, say, two hours before the time appointed for the inquest. I am sure I need only express the wish and wherever possible it will be complied with.

Yours truly,
H. S. FRENCH.

In answer to this a reply was sent signed by the 23 practitioners concerned. The letter points out, firstly, that the coroner is not legally entitled to request either a written report of a post-mortem examination or that one should be delivered at any specified time or place Secondly, that compliance with the coroner's suggestion would cause a great increase of work and very likely great inconvenience to medical men. Thirdly, that such process as that contemplated in the coroner's letter was never contemplated when the present Coroners Act was passed and that the remuneration at that time fixed was only meant to be reasonable compensation for the definite services of medical witnesses required by the Act. The signatories of the letter, therefore, beg the coroner to understand that although they will use every endeavour to assist the coroner according to the terms of his letter, such increased work will be purely voluntary and therefore that inability to perform it on any occasion shall be without prejudice either to the practitioner or to his verbal evidence. So far as we can see the coroner is entirely in the wrong. He asks as a right what at the most he could only request as a favour. The Cambridge coroner is a solicitor as well as a coroner. We wonder what his answer would be were he to have a letter from a judge before whom he was about to appear requesting a complete note of his arguments in the forthcoming case to be sent to the court two hours before the commencement of the trial.

THE next general meeting of the Medico-Psychological Association of Great Britain and Ireland will be held at the Langham Hotel, Portland-place, London, W., on Friday, May 15th, at 4 P.M., under the presidency of Dr. J. Wiglesworth. An adjourned discussion will take place at four o'clock upon the two papers read before the last general meeting at the Derby County Asylum by Dr. Ernest W. White (the Care and Treatment of Persons of Unsound Mind in Private Houses and Nursing Homes) and by Dr. Outterson Wood (Lunacy and the Law). The members of the association will afterwards dine together at the Langham Hotel at 6.30 P.M.

AMONG the names of 15 candidates who were selected on April 30th by the council of the Royal Society to be recommended for election into the society appear those of Dr. W. M. Bayliss, Dr. S. M. Copeman, and Professor J. Symington. Dr. William Maddock Bayliss is Assistant Professor of Physiology at University College, London; Dr. Sydney Monckton Copeman is a Medical Inspector of the Local Government Board and is well known for his researches into the nature of variola and vaccinia; and Professor Johnson

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[1] Anatomische Abtheilung, Hefte 5 and 6, 1902.

Symington is Professor of Anatomy at Queen's College, Belfast.

THE council of the Association of Public Vaccinators of England and Wales unanimously passed the following resolution at their meeting on May 1st and forwarded it to the President of the Local Government Board: "That this association would welcome the appointment of a departmental committee of the Local Government Board to inquire into the details of the working of the Vaccination Acts, 1867 to 1898, and would be prepared to give every possible assistance in any such inquiry."

WE understand that the complimentary dinner arranged by the London and Counties Medical Protection Society in honour of its president, Mr. Jonathan Hutchinson, has, at Mr. Hutchinson's request, been deferred from the beginning of May until July 23rd next. Medical men wishing to be present should communicate with the Secretary, London and Counties Medical Protection Society, 31, Craven-street, Strand, London, W.C. The price of the dinner tickets, exclusive of wine, is 7*s.* 6*d.*

A COURSE of 12 lectures in Experimental Pathology (the Gordon Lectures) will be delivered at Guy's Hospital Medical School during the summer session on Thursdays at 4 P.M. in the Physiological Theatre by Dr. E. W. Ainley Walker, the Gordon lecturer. The first lecture was delivered on Thursday, May 7th. These lectures are open to students from any of the medical schools of the University of London and to members of the medical profession.

AT the meeting of the Grand Lodge of English Freemasons held at Freemasons' Hall, Great Queen-street, London, W.C., on Wednesday, April 29th, among the Grand Officers appointed for the ensuing year by the M.W. Grand Master, H.R.H. the Duke of Connaught and Strathearn, was Mr. J. Ernest Lane, F.R.C.S., P.M. of the Sancta Maria Lodge (St. Mary's Hospital) who was appointed to the office of Senior Grand Deacon.

A MEETING of the Childhood Society will, by permission of Lord Egerton of Tatton, be held at 7, St. James's-square, London, S.W., on Monday, May 11th, at 3 30 P.M., when an address will be delivered by Professor John Edgar, Professor of Education, St. Andrews University, on the Universities and the Scientific Study of Children, with Special Reference to the Teaching Profession.

A MEETING will be held at the Polyclinic, 22, Chenies-street, Gower-street, London, W.C., on Friday, May 15th, at 2.30 P.M., when Mr. Jonathan Hutchinson will report the results of his recent tour in India for the investigation of leprosy. Discussion will be invited and the Right Hon. Lord George F. Hamilton, P.C., M.P., Secretary of State for India, has consented to take the chair.

SIR FRANCIS LAKING, Bart., G.C.V.O., who accompanied His Majesty the King on his recent tour, was appointed by M. Loubet, the President of the French Republic, a Commander of the Legion of Honour, having previously been appointed by the King of Italy a Grand Cordon of the Order of the Crown of Italy.

THE first meeting of the Central Midwives Board has been held, at which progress, we understand, was made in the drafting of the rules under Section 3, Clause 1, of the Act.

THE annual meeting and May dinner of the Aberdeen University Club (London) will be held in the Trocadéro Restaurant on Wednesday, May 20th, at 7 P.M., Mr. James Cantlie in the chair. Members desiring to be present are requested to communicate with the honorary secretaries, Dr. James Galloway and Dr. J. Malcolm Bulloch, at 54, Harley-street, W.

THE Lord Mayor's committee of inquiry, after considering the report of a sub-committee appointed to investigate the pecuniary management of St. Bartholomew's Hospital, has unanimously resolved that the governors of the hospital are justified in appealing to the public for funds to utilise the land acquired from Christ's Hospital.

THE annual general meeting of the Medical Defence Union will be held on Thursday, May 21st, at 5 P.M., at the registered offices, 4, Trafalgar-square, W.C.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

CONFERENCE OF THE CLERGY AND MINISTERS OF RELIGION.

ON Thursday, April 30th, in the saloon of the Mansion House a conference of the clergy and ministers of religion of all denominations was held under the presidency of the Right Hon. Sir MARCUS SAMUEL, Lord Mayor of London and treasurer of the Fund, for the purpose of discussing the best means of increasing the collections on Hospital Sunday.

The LORD MAYOR, in opening the proceedings, referred to the forthcoming visit of the King and Queen to St Paul's Cathedral. He said that when the highest in the land marked their approbation of the objects of the Fund in such a manner at what must be some sacrifice to themselves by travelling a considerable distance from their home he hoped that their kindly interest and the force of their example would bear such fruit as would enable a record collection to be made in 1903.

Archdeacon SINCLAIR said that the present conference was the result of a similar conference which took place at his house with the object of seeing whether it was possible to do anything to stimulate the clergy of London to make greater efforts in connexion with Hospital Sunday. At St. Paul's Cathedral the collections used to be very small but a former Lord Mayor wrote a letter to all the men of business in St. Paul's Churchyard and the neighbourhood and the result was a very substantial increase in the collection at St. Paul's.

The Rev. Canon FLEMING said that he was truly glad and he thought it was a very happy omen that the Lord Mayor had summoned them to a conference. They stood on the eve of a most important year for hospitals. The visit of the King and Queen to St. Paul's Cathedral was one of the great starting points for effort this year. Some years ago his friend Dr. Forrest, then vicar of St. Jude's, South Kensington, and now Dean of Worcester, said to him, "Fleming, how is it that you get that money? I will beat you next year," and he did beat him That was exactly the sort of rivalry that he had come to promote. It was a holy rivalry, free from all jealousy, in the cause of God's sick poor in our hospitals. His method was simply one of organisation. He had a letter asking for help largely printed and every one of his congregation besides those interested in the work of his church received one, while the same letter was for three weeks plentifully distributed in the pews of the church. He also gave a paper to every child in his Sunday school which stated: "Your teacher will be happy to receive any sum that your parents may intrust to you for the sick poor in our hospitals on Sunday next, which will be added to the church collection," and in this way he never got less than £10. It would be a most happy departure if all the churches would bring their Sunday schools in this way into closer touch with the work of the Fund. Then as to personal correspondence. He wrote something over 200 personal letters to the wealthiest people in his church. It would not do to have typewriting. The letters generally ran something like this: "Dear Sir or Dear (putting in the name according to the degree of intimacy with the recipient).—Should anything prevent you from being present on Hospital Sunday, June (here insert date), I shall be happy to receive any thank offering you may intrust to my hands for the sick poor in the hospitals." Experience proved that in all churches the congregations when asked readily supported the Fund, and as all creeds so gladly united all ministers should lead the way in their own congregations

The Rev. Prebendary RIDGEWAY said that his experience was very much the same as that of Canon Fleming. It was the personal letter which made the congregation feel that the Hospital Sunday Fund was something in which they must take a personal part. He sent letters to all sorts of people in the parish. If at one time it was desirable to direct the attention of absentees from church on Hospital Sunday still more was it so now. "Week-ends" were an important factor in London life which was very seriously affecting London churches. "Week-ends" meant people being out of town and away from their proper place on Sunday and the only way to get contributions from those people was to bombard them before Hospital Sunday, reminding them that being out of town did not excuse them from supporting the hospitals.

The Rev. C. H. GRUNDY said that some congregations had the idea that a small collection would not look well or be acceptable. Every congregation must make its collection proportionate to that congregation and the collection should be adequate to the neighbourhood. This applied to the congregation outside as well as in the church.

Dr. ADLER said that after what had been said he was sure that the ministers of his synagogues would not content themselves with a formal invitation to the worshippers to subscribe, but would send a few lines signed by themselves asking for subscriptions in the event of the worshippers' absence to be sent to the ministers.

Monsignor POYER said that he would have great pleasure in conveying all the suggestions that had been made to Cardinal Vaughan who, he felt sure, would at once commence to organise greater efforts than had been made hitherto. With regard to the organisation of ladies he would have much pleasure in putting the ladies of charity at the disposal of the Fund.

The Rev. CHARLES VOYSEY said that when he contemplated the vast wealth of the metropolis and compared the annual contribution to the Fund—some £50,000 or £60,000 at the most—and remembered that this was not an uncommon price to pay for a picture, no words could express his astonishment or shame. Why were these things so? The rich people who gave little or nothing to the Fund were generally too poor to give. They lived up to their incomes or spent their surplus in luxury and pleasure. They must convert these people from selfishness to love and open their eyes to see that what they called their wealth belonged to their Maker. Until they got at their hearts they could not get at their pockets. He threw out this hint to his clerical brethren, some of whom had wealthy persons in their congregations who did not do their duty. Take away extravagant and outlandish amusements, costly entertainments and ceremonies, and above all ornamental dress, and the vast sums now wasted upon them would be available for charity and they would never again have to go begging for Hospital Sunday. He had never done such a thing in his life as preach a charity sermon.

Mr. RICHARD B. MARTIN, M.P., appealed to all ministers to give the Fund the whole of their collections. A large sum of money was spent in advertising Hospital Sunday and it was unfair to the Fund not to give it the whole sum collected.

The Rev. RAVENSCROFT STEWART proposed a vote of thanks to the Lord Mayor which was seconded by the Rev. S. MARTYN BARDSLEY and supported by the Rev. Prebendary COVINGTON. The vote was carried unanimously.

In his reply Sir MARCUS SAMUEL said that the interesting discussion to which he had listened that day was a complete justification for acceding to the request of Sir Edmund Hay Currie that a conference should be held in the Mansion House. It was, of course, only a preliminary of that great meeting which was arranged for June 8th when his Grace the Archbishop of Canterbury, Sir Frederick Treves, and Sir Douglas Powell, all able speakers and attractive orators, would address the meeting. The Lord Mayor's life of office was a continuous one of appeals. Nevertheless he intended sending out 5000 letters to the home counties, for he found that out of the 100,000 patients in the hospitals of London 25,000 came from the counties outside London. There was thus a claim upon those districts. If the prediction that this year would be a record one in the history of the Fund should prove true it would be one of the greatest joys of his mayoralty.

MEDICINE AND THE LAW.

Seven Years' Penal Servitude for an Abortionist.

AT Manchester assizes on April 24th Mr. Justice Lawrance sentenced to seven years' penal servitude a woman who had practised for 15 years as a midwife and had performed an illegal operation upon her own daughter who had since died from the blood poisoning set up. In this case the prisoner appears to have been very unwilling at first to do what her daughter asked her to do and to have yielded only after considerable pressure. No doubt this circumstance and the fact that she had suffered the grief of seeing her child die as the result of her act influenced the jury to return a verdict of "Manslaughter" with a strong recommendation to mercy instead of the verdict of "Wilful murder" which would presumably have been in accordance with the law and the facts. The sentence of seven years' penal servitude will be sufficient to act as a deterrent to others and taking into consideration the temptation to which the prisoner was subjected it may no doubt be regarded as adequate.

Surgery and Workmen's Compensation.

In three cases under the Workmen's Compensation Acts which have recently been argued upon appeal an interesting question has been raised as to the liability of the employer to continue to pay compensation for injuries suffered in the course of his employment where the continuance of the disablement is, or may be, due to the workman's refusal to submit to surgical treatment. The first of these cases[1] was heard in Scotland in last December. The employers sought to exercise the right given to them by the Act to have the payments which they had been ordered to make reviewed in order that they might be discontinued. They had required their workman, as they were entitled to do under the Act, to submit himself to a medical practitioner for examination and this gentleman, Mr. Thomas Kennedy Dalziel of Glasgow, had reported with regard to an injury to the right ankle of the workman caused by it being struck with a piece of iron: "The present condition of the foot is due to the varicose condition of his veins together with want of suitable exercise; the stiffness of the ankle is due to persistent malposition and might well have been rectified long ago by suitable massage and movement. I do not think that the blow on the outer side of the ankle received over three years ago can now be considered as the cause of his defective limb." It was found as a fact by the sheriff substitute that the workman had not used his foot to the extent to which he had been recommended to do so and had not exercised it by passive movements at all and that he had refused to submit himself to surgical treatment at Paisley Infirmary where arrangements had been made for him. The medical referee to whom the matter was submitted, owing to the evidence of Mr. Dalziel being dissented from by other witnesses, reported that "the present condition of the ankle is due not to the accident but to want of proper treatment since the accident took place." The sheriff, with these materials before him, was of opinion that the employers were not bound to continue their weekly payments and upon appeal the court upheld his decision, Lord Adam, who delivered judgment, saying in the course of doing so: "I am far from thinking that in every case a workman who has been incapacitated from work by an accident is bound to submit to any medical or surgical treatment that may be proposed, under the penalty, if he refuses, of forfeiting his right to his weekly payments. It is easy to suppose a case where a more or less serious operation is proposed with more or less probability of a successful cure, and in such a case I think it would be out of the question to say that the workman is bound to submit to it. But that is not the kind of case we have to deal with. In this particular case the injury was comparatively slight and the treatment proposed simple and common and brought within his reach and the benefit which would have resulted therefrom not doubtful. I think it was such treatment as any reasonable man would have adopted."

In the second case referred to,[2] which like the first was argued in the Scotch courts, the workman's thumb had been injured and had been amputated at the metacarpal joint. He still suffered pain after this and was prevented from doing his work at a coalpit where he had to shovel coal and to pull levers at a washing machine, and a further operation on the thumb-joint took place at the Royal Infirmary, Glasgow. In spite of this he continued unable to work; a third operation had been advised but he refused to undergo it. The findings of fact by the sheriff substitute as to the matters immediately in issue were that in spite of the two operations the workman still "suffered pain and was incapacitated from work in consequence of the adhesion of the skin to the stump. That this was due either to the defective performance of the operation in June or to some neglect in attending to the hand thereafter. That the appellant was examined on Sept 21st, 1901, and advised that he should undergo another operation, which would in all probability remove the sensitiveness of the injured part and enable him *to earn wages as before, or at least to earn more than he is* able to do now. That the operation so advised is a simple operation, not attended with serious risk or pain, and is such as a reasonable man not claiming compensation or damages would for his own advantage or comfort elect to undergo." In this instance again the court practically upheld the decision of the sheriff substitute, for it caused the payments to be reduced to 1*d.* a week until further order. One judge, however (Lord Young), dissented, saying that no case had been cited or suggested in which it had been held that a workman must submit to a surgical operation before he could be found entitled to the benefits of the Act and he added that it was not suggested that there was anything beyond an honest shrinking from a surgical operation by a man who had already submitted to two previous operations without the pain suffered by him being removed. Lord Trayner, who formed one of the majority, upon this pointed out that the finding of fact was that the proposed operation was not attended with serious risk or pain and observed that he should not himself hold a surgical operation to be compellable where risk to life or danger of permanent injury to health was present.

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[1] Dowds v. Bennie and Son, 40 Scottish Law Reporter, 239.

[2] Anderson v. W. Baird and Co., Limited, 40 Scottish Law Reporter, 263.

The third case to which reference has been made[3] differed from the preceding two in that the county court judge at Birkenhead (His Honour Judge Bowen Rowlands, K.C.) had decided in favour of the injured workman who had refused to undergo some form of surgical treatment. In this case, as in the last one referred to, the injury affected the bone of a finger and the proposed surgical interference does not seem to have been of an obviously difficult [illegible]

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an [illegible]
rec [illegible]

man's refusal was justified. He was upheld in this by the Court of Appeal without counsel for the respondent being called upon to argue. Perhaps a fuller report of the judgment delivered by the Master of the Rolls may be published in due course, as well as of the evidence which was given before the county court judge. The Master of the Rolls, according to the *Times* report of the case, said "that there was nothing in the Act which imposed upon the workman an obligation to submit to a surgical operation." Standing by itself without anything to limit its application this dictum scarcely appears to afford so useful a guide for judges on future occasions as those quoted above, emanating from the Scotch court. What is a "surgical operation" in the case of a finger crushed and lacerated by machinery? If the workman declining professional aid immediately after the accident prefers to bind up his hand with his pocket handkerchief, to go home and to remain there, is the employer to be liable to compensate him for the result of an injury thus treated, whatever that result may be, on the ground that he is not bound to submit to a "surgical operation"? Is the treatment immediately necessary in such a case less a "surgical operation" than that which may become desirable at a later stage? It is not stated in so many words in the Workmen's Compensation Act that the injured workman shall be required to undergo such treatment as a reasonable man would submit to who had no employer to compensate him, but unless he is so required considerable injustice may be done to those [illegible] onsible for his disablement [illegible] have gone into the matter [illegible] suggested rules which are consistent with good sense and with justice to both parties.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

A COMITIA was held on April 30th, Sir WILLIAM SELBY CHURCH, Bart., K.C.B., the President, being in the chair.

The following gentlemen, having passed the required examination, were admitted as Members of the College: Dr. Emil Paul Baumann, Dr. Robert Alfred Bolam, Dr. Edward Alfred Gates, Dr. John Hay, Dr. George Lucas Pardington, Dr. Llewellyn Caractacus Powell Phillips, and Dr. James Hutchinson Swanton.

Licences to practise were granted to 109 gentlemen who had passed the necessary examinations.

The following Members were elected Fellows of the College: Dr. Arthur Philip Beddard, Dr. Edmund Cautley, Dr. James Stansfield Collier, Dr. Bertrand Edward Dawson, Dr. Edwin Goodall, Dr. William Gordon, Dr. Alfred Milne Gossage, Dr. George Francis Angelo Harris, Dr. Laurence Humphry, Dr. Robert Hutchison, Dr. James Alexander Lindsay, Dr. Alexander Morison, Dr. Frederick John Poynton, Dr. George Alexander Sutherland, Dr. Walter William Hunt Tate, and Dr. StClair Thomson.

The PRESIDENT announced that the title of the Bradshaw Lecture to be delivered by Dr. E. F. Trevelyan this year would be Some Observations on Tuberculosis of the Nervous System.

Communications were received from (1) the Secretary of the Royal College of Surgeons of England reporting certain proceedings of the Council on April 2nd; and (2) the Sanitary Institute, inviting the College to send delegates to the annual congress to be held at Bradford from July 7th to 11th.

The following report was received from the Committee of Management:—

1. That the University of Cincinnati, United States, be added to the [illegible] of study.

2. The committee recommend that the following institution, which [illegible] ted on as [illegible] to the list [illegible] gland for [illegible]

Rossal, Fleetwood .... Rossal School.

3. The committee also recommend that the following clause and notes, having been adopted by the General Medical Council, be added to Section II. paragraph II. of the Regulations for the diploma in public health—viz.:—

> 4 (c) A sanitary staff officer of Royal Army Medical Corps having charge of an army corps, district, or command, recognised for this purpose by the General Medical Council.

[illegible]

Note to follow Clause 5:—

> *Note* (2). In the case of a medical officer of the Royal Army [illegible] cipal medical officer under [illegible] e has during a period of at [illegible] engaged in acquiring a [illegible] ministration in relation to [illegible] s evidence under *Rule* 4.

Dr. E. H. STARLING proposed the following motion which was seconded by Dr. J. KINGSTON FOWLER and carried:—

> That a committee be appointed to consider and report upon any alterations that may be desir [illegible] first conjoint examination. That [illegible] to confer with representatives of [illegible] the College of Surgeons be invited [illegible] this purpose.

The following Fellows were nominated to serve on the committee: Dr. E. H. Starling, Dr. F. T. Roberts, Dr. S. H. West, Dr. W. Pasteur, Dr. H. D. Rolleston, Dr. Norman Moore, and Dr. L. Shaw.

Dr. W. H. Allchin was re-elected as a representative of the College on the Senate of the University of London.

The Harveian Librarian (Dr. J. F. Payne) presented a list of books and other publications presented to the library during the past quarter and the thanks of the College be definitely proved that it did. He says: "If any part of the small intestine becomes unduly full the mesentery of that portion is stretched into an irregular wavy fan-shape and although the coil cannot be straightened it is made to assume a gentle curve at the distal end of its mesentery." And again further on he says, "If there are several distended ends together the gut at the end of each coil must bend sharply"—in other words, become kinked. What exactly he means by the distal end of the mesentery is not clear, for the whole length of the intestines are attached at the distal end of the mesentery; probably he means at the end of that particular coil of intestine, for he says, "the flow of the contents round this curve is easy." Unless Mr. Malcolm means that the fact that there are several distended coils determines the sharp bending the two statements are contradictory, for if distension causes a gentle curve that is a very different thing from a sharp bend. Distension to any great extent certainly causes a sharp bend and that whether the intestines are within or without the abdominal cavity so long as they are attached to the mesentery.

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[3] Rothwell v. Davies, Times, April 27th, 1903.

Then Mr. Malcolm says that "when a piece of bowel which has not lost its peristaltic power distends it must push the ends of its coils against the boundaries of the peritoneal cavity formed by the abdominal walls and any piece of gut which is paralysed and inert must be bent at a sharp angle to an active piece of distended bowel with which it is continuous." But when a coil of bowel distends its ends will tend to kink exactly in proportion to the amount of distension, whether there are a few inches of inert gut at its end or not. It is not the inertia of the gut which determines the kinking, it is the degree of distension. If Mr. Malcolm means that if the few inches of inert gut occur, *not* where kinking from over-distension would under any circumstances occur but at the middle rather than at the end of a coil of intestine as it lies across the abdominal cavity, then I fail to see why it should kink at all. Mr. Malcolm also says that he cannot agree with me that the formation of a fistula is an unreasonable method of treatment if the nipped bowel is paralysed but the bowel above retains its peristaltic function. If Mr. Malcolm could prove that the paralysis of the few inches of nipped bowel did really cause an actual obstruction, then clearly the reasonable treatment would be to open the bowel above or resect the severely damaged part, but he does not prove it. My contention was that drainage of the intestine *as usually employed*, after the relief of a mechanical obstruction, in order to empty the paralysed and distended ends was an unreasonable proceeding.

I am, Sirs, yours faithfully,

Bristol, May 3rd, 1903. CHARLES A MORTON.

THE LONDON COUNTY COUNCIL AND THE APPOINTMENT OF OFFICIAL PATHOLOGISTS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 2nd, p. 1251, is an annotation dealing with the meeting held at the Middlesex Hospital in reference to the London County Council and pathologists In regard to your remarks I should like to point out, first, that the meaning which you attach to "delegate" is a secondary one and true only in a limited sense The proper signification of "delegate" is wider and more general, though in some circles, as trades unions, &c., it has the acceptation you impart to it. Secondly, in regard to the voting The proceedings began by the chairman reading letters from King's College Hospital and Westminster Hospital which clearly stated the positions of both these corporations. My part in the business was therefore at an end and I remained only out of curiosity to hear what more could possibly be said on the subject.

After some discussion Dr. C. J. Cullingworth moved a harmless, innocuous resolution which allowed every body to do as it pleased. Up to this point I had no intention of taking part in the proceedings, but when a tyrannical and socialistic amendment was moved—an amendment which had the object of preventing individual action, was hostile to freedom of thought, and amounted to a declaration that certain institutions regarded themselves as the judges of what was right and proper for the rest of the profession—I felt that I ought to protest No objection was taken to my voting and in connexion therewith I may mention that the institutions located in Smithfield and the Borough had with a prudent thoughtfulness provided themselves with two representat apiece, though the votes of these extra *arbitri morum* disallowed. Thirdly, I think that if some 12 months ago Council had approached the profession informally jus ascertain the feeling of the latter in regard to this impor question before it was brought forward publicly m trouble might have been saved.

I am, Sirs, yours faithfully,

May 5th, 1903. R. G. HE

UNIVERSITY OF LONDON: SENATORI ELECTION.

To the Editors of THE LANCET.

SIRS,—It has not hitherto been the custom that candid for election to the Senate of the University of London sh issue an address to the members of Convocation, and we not apprehend that Sir Thomas Barlow will, in the pre instance, depart from so laudable a practice.

We therefore ask you to allow us to make known thro your journal that Sir Thomas Barlow, by his long and sustained service to the University continues, in our opin to merit the strong support of all those graduates who at heart the development of the University in the interest true education.—We are, Sirs, yours obediently,

CHARLES A. BALLANCE.
J. MITCHELL BRUCE.
NORMAN DALTON.
A. PEARCE GOULD.
F. DE HAVILLAND HALL.
J. A. NUNNELEY.
F. G. PENROSE.
SIDNEY PHILLIPS.
FRED. T. ROBERTS.
A. ERNEST SANSOM.
MARY SCHARLIEB.
T. MARKHAM SKERRIT
FREDERICK TAYLOR.
H. J. WARING.
JUDSON BURY.
ALFRED HY. CARTER.
RUSHTON PARKER.

May 6th, 1903.

THE ROYAL COLLEGE OF SURGEONS IRELAND.

To the Editors of THE LANCET.

SIRS,—It may be in the recollection of your readers some time ago correspondence of mine appeared in columns of THE LANCET relating to an examination the Fellowship of the above College. The circumstan were, to my mind, so unusual, from the fact m particularly that of 40 candidates examined at four exami tions 39 passed and that the College never denied hav broken its charters, by-laws, and Fellowship regulati at these examinations, that I felt no diffidence whate in giving publicity to the fact of my rejection. It further interest your readers to know that not hav sufficient confidence in the system of examination I refu a re-examination proffered me through my solicitor subsequently returned the certificate of primary exami tion which I had, in common with a few hundred ot Licentiates and third-year students, *obtained* without mination for £10 10*s*. on the occasion of Her late Majes visit to Ireland. This latter I did on the *ground* that I examined in a subject which according to its regulati the primary certificate exempted me *from*. The Coll whereupon acknowledged "the resignation" of my prim "examination" (*sic*). The President, Vice-*President*, Council subsequently refusing to return me my fees I s them in the Recorder's Court, Dublin, for their *recovery*.

Although the College had feed a strong Bar in the pers of the Solicitor-General for Ireland and Mr. W. G. Jeffers an eminent junior, no cross examination was made was any other defence attempted except the stock *one* a rejected candidate's "grievances." Indeed, the Colle frankly owned up to the violation of its charters by-laws through its secretary to council swearing that far as the Fellowship examination went it had been *doi* so for 14 years—that, in short, so many candidates n entered for this examination it would be *impossible* provide the "three or more" council witnesses requir Considering that each candidate paid £26 5*s*. for the privile of examination it apparently never occurred to the College pay the charter witnesses for attending to their char duties. The Recorder, while admitting the examination be "avoidable" one, referred the case without prejudice the superior courts.

To expend a few hundred pounds in endeavouring recover £26 5s is hardly a business transaction Some two months ago, however, I made further application to the College for particulars as to the amount I should now have to pay for a fresh Fellowship examination, whether I should receive consideration for the Primary Fellowship, subjects for which alone the College held my £10 10s as a clear profit, and also to be favoured with a copy of its recent by laws affecting the conduct of Fellowship examinations Except a letter in reply from its secretary, inclosing by the direction of the Council a copy of their Fellowship Regulations dated 1898, I was not given further information I presume therefore that should I care once more to undergo my experiences I must again pay up £26 5s, and that so far as a pronouncement on its mode of Fellowship examination goes the old order remains of examination without witnesses as was the case in the first instance The question what a chartered body is and why its by laws must be sanctioned by the Privy Council and why they then may be ignored by the corporate body most concerned will remain to me ever an interesting problem I am, Sirs, yours faithfully,

S WESLEY WILSON

April 20th 1903

AN OLD TITLE

To the Editors of THE LANCET

SIRS,—A book has just been published entitled, "Elementary Ophthalmic Optics" Will you kindly allow me a few lines to state that the author has appropriated the title of a book published for me in 1901 by Messrs J and A. Churchill and subsequently reviewed in your columns? I am, Sirs yours faithfully,

J HERBERT PARSONS.

May 1st 1903

⁂ As far as possible authors should avoid using titles belonging to other books, but this is not possible always in scientific literature "A System of Surgery" cannot be called by any other name if the contents fulfil the promise of that title, and the same must be said for example of "A Handbook of Clinical Medicine"—ED L

THE SEQUEL TO A "SUCCESSFUL" CASE OF EXCISION OF A CHRONIC GASTRIC ULCER

To the Editors of THE LANCET

SIRS,—In THE LANCET of Dec 13th, 1902 I published what I believed at that time to be a successful case of excision of a chronic gastric ulcer I regret to say that the patient has just died from malignant disease of the stomach and as the circumstances are of some interest perhaps you will allow me briefly to record them

The patient was a man aged (at death) 50 years After a history of pain after food and emaciation lasting about two and a half years I excised in November, 1901 a typical chronic ulcer from the anterior wall of the stomach At that time he weighed 6½ stones In the next six months he rapidly gained weight until he was 10½ stones in April 1902. He came to consult me again at the beginning of this year He had epigastric pain which came on always at night, and occasional vomiting after food His weight was 8 stones 2 pounds There was some induration in the region of the old scar I believed him to be suffering from a recurrence of the gastric ulcer and advised a gastro enterostomy He was reluctant to submit to further operation but came to me again in February At this time the area of resistance was much larger and more defined than it had been six weeks previously and the abdomen was opened on Feb 26th The entire stomach formed a hard pyriform tumour which felt quite solid and was uniformly affected from the cardiac end to the pylorus with what must have been malignant new growth At the time of this operation it was quite impossible to say from the view of the exterior of the stomach that this growth had begun at any particular spot. It resembled the diffuse carcinoma or "indiarubber bottle" stomach in the great and uniform thickening and in the preservation of the natural shape of the viscus There were several discrete enlarged hard glands in the gastro hepatic omentum He lived nine weeks after this time He had almost no pain and only occasional vomiting and was able to take light nourishment by the mouth until the day of his death The immediate causes of death seemed to be anæmia or inanition and toxæmia Dyspnœa, palpitation, and a gradually increasing drowsiness closed the scene.

I regard the case as one of chronic gastric ulcer which either became malignant before excision or else by its long continued irritation induced a diffuse malignant growth in the whole of the stomach The two and a half years' history of dyspepsia preceding the excision and the year's good health following it support the idea that the disease was in the first place inflammatory and only as a sequel malignant I am sorry to say that no post mortem examination could be obtained —I am Sirs, yours faithfully,

ERNEST W HEY GROVES, M D Lond

Kingswood Bristol May 2nd 1903

FREE ANTITOXIN TO THE MEDICAL PROFESSION.

To the Editors of THE LANCET

SIRS —In THE LANCET of April 4th, p 995, in the "Wales and Western Counties Notes" it is stated that the corporation of Hanley had decided to "supply antitoxin free of charge to medical practitioners in the town and to pay them a fee of 2s 6d in respect of the first case in a house (other than the patient) treated with antitoxin and 1s for each of the other inmates treated There is reason to believe that this is the first time an English sanitary authority has dealt with an outbreak of diphtheria by encouraging the use of antitoxin as a prophylactic" I am aware that in many districts and for several years past antitoxin has been distributed gratuitously by sanitary authorities but the novelty at Hanley appeared to be the payment of fees for treating contacts in infected houses and if this course has been adopted in Guernsey, in Camberwell or in Birmingham (though this is not quite clear from the communications you have received on the subject[1]) then the Hanley corporation cannot be credited with the initiation of the scheme

I quite admit that reading the last sentence of the paragraph quoted above by itself the interpretation put upon it by your correspondents is permissible

I am Sirs yours faithfully,

THE WRITER OF THE NOTE

May 2nd 1903

SUBSTITUTION IN THE SPIRIT TRADE

To the Editors of THE LANCET

SIRS —As a layman in a position to know intimately all that is going on I hope you will allow me to indorse everything stated in the annotation in THE LANCET of May 2nd p 1253 in regard to what you politely term the practice of substitution prevailing in the spirit trade I am, indeed, very pleased to see THE LANCET devoting its attention to this very important question which sooner or later, must be seriously taken in hand by the Government Indeed, in view of the evils which you have pointed out and which are bound to exist where the authorities allow anything to be sold in the form of spirit it passes comprehension that the Government should be so supine on the matter especially with the returns of lunacy and crime showing abnormal and alarming increase Quite recently I read that the Archdeacon of London attributed the increase of crime in Scotland to the bad drink sold to the people as substitutes for genuine malt whisky and brandy, and in the last annual report of the London County Council published a few weeks ago some facts and figures were given as to the increase of lunacy which are really startling The number of lunatics for which the Council is required to find accommodation has gradually increased from 10 356 in 1891 to 15 511 in 1901—i e, by 5 155 or about 50 per cent. in ten years And the report adds that drink and domestic and business troubles are the most common exciting causes But is it drink so much as bad drink? And in regard to this I can confirm all that you say as to the virulent maddening spirit that is sold to the public nowadays as whisky, especially, of course in the poorer districts And this is not the worst of it This spirit is sold in every fraudulent guise—as fine old Scotch fine old Highland, &c. When the Government allows without let or hindrance any stuff to be palmed off as the genuine article is it any wonder that substitution and fraud are rampant? Why go to Scotland for malt whisky, which will cost 3*s.* or 4*s.* a gallon, when I can freely import German spirit at 6*d.* a gallon, made from potatoes or any farmyard rubbish, and sell it as genuine Highland malt? Or if I should entertain any patriotic prejudice against the German article I can obtain in England spirit distilled from molasses and even have it bottled and labeled as finest old Scotch in a Government bonded warehouse under the very eyes of the Government officials. And all this "huge systematic fraud" is allowed while the poor grocer is at once pounced on should he sell, say, margarine (which is a wholesome substitute) for butter. Truly it does not lie with the whisky trade to complain of persecution or repression. It is, perhaps, the only trade in the country to-day in which the most elementary requirements of business can be safely ignored and fraudulent descriptions affixed, not only with impunity but under Government supervision, to what is sold to the public. And this applies not alone to obscure dealers but to some of the popular blends of the day which are sold under such terms as "Highland" or "malt" whisky when, perhaps, only about one third or so is Highland or malt, the rest being patent still spirit. But the stuff which is sent to our Colonies, to Australia, Canada, South Africa, &c., is usually much worse than that retained for consumption at home. I have seen spirit made up for the colonial market as Scotch and Irish whisky which makes me shudder to think of any human being drinking it. I do not object to people drinking patent still spirit if they want it, but what I do protest against is this spirit, or admixtures of it, being labeled as "Highland" or "malt" whisky and fraudulently sold as such. But from whatever aspect the question is regarded it is a monstrous state of things that the consumer of spirituous liquors has absolutely no protection as to the purity, genuineness, and wholesomeness of those liquors.

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[1] THE LANCET April 25th p 1199 and May 2nd pp 1254 and 1260

I am, Sirs, yours faithfully,

May 4th, 1903. LUX.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Indian Research University near Bangalore.—The Improvement of Bangalore City.—A Scientific Research Department at Pusa.—The Plague Epidemic.—Nursing Arrangements in the Calcutta Hospitals.

THE site assigned in British India by the Mysore Government for the location of the Indian University of Research arising out of the offer of an endowment measures about 370 acres and is situated in the north-west of the Bangalore cantonment, about four miles beyond the municipal boundary. Besides this gift the Mysore Government has offered five lakhs for initial expenses. There is no doubt that the fixing of this site for this university will prove of great advantage to Bangalore and to the Mysore State, as it will become the great centre in India of scientific thought and research and a place of pilgrimage for all lovers of learning. Bangalore enjoys a climate suited to Europeans; its situation is central, and there are an abundance of available land and an unlimited supply of good water. The annual expenditure will be approximately £10,000, allowing salaries as follows: director, £1750; professor of chemistry, £1000; professor of experimental physics, £1000; professor of experimental biology, £1000; three assistant professors at from £450 to £600; secretary, from £150 to £200; glass expert, from £200 to £300; and six instructors at from £720 to £960 As to the future expansion of the University it is believed that further specialisation will be called for in each of the three departments of experimental science. In all probability there will be separate professors for pure chemistry, agricultural chemistry, metallurgy, general physics, electric engineering, animal physiology, vegetable physiology, and bacteriology.

A large project, estimated to cost nearly 18 lakhs, is now before the Government of India for the relief of the congested areas of the civil station of Bangalore on the lines adopted by the Mysore Government in extending the habitable areas of Bangalore native city. The present conditions of overcrowding are appalling. The provision of building sites on open and high ground which was made by the Mysore Government some time ago has been attended with excellent results. The civil station can do nothing without the help of the Government of India, as the municipal commissioners are already suffering from a depleted exchequer and are engaged on drainage works and an extension of the water-supply.

The Government of India is now working out the details connected with the Scientific Research Department which will be presently started at Pusa. The whole scheme will then be submitted for the Secretary of State's approval and sanction. It is probable that several European officers will be appointed to Pusa if the Government of India's suggestions are approved. No details, however, can be published at present.

The unprecedented total of 34,110 plague deaths recorded for the week ending April 4th has been followed by a sharp decline. For the past week only 27,787 deaths have been returned. In the corresponding week of last year there were 24,380 deaths. The Easter holidays and the great Mahomedan Mohurram festival may account for the great reduction officially returned. The decreased mortality has occurred in the Bombay Presidency, in Bengal, and in the United Provinces, and both the cities of Bombay and Calcutta record a lower mortality. The few details published this week are: in the Punjab 13,225 deaths as against 14,604 last week, in the Bombay Presidency 4405 as agains 6098, in the United Provinces 3211 as against 5130, and i Bengal 2445 as against 3387. Calcutta showed 819 death as against 980, and Bombay about 1500 as against 1858 Karachi is still suffering severely, but the cities of Poona and Bangalore are now practically free.

The nursing arrangements for the principal hospitals in Calcutta have undergone thorough revision during the past year. The Calcutta Hospital Nurses' Institution since its foundation in 1859 had been managed by a committee of ladies who succeeded in raising about Rs.15,000 per annum, and the institution was subsidised by the Government. On late years a larger staff of nurses has been necessary and last year a new committee was formed in order to bring the public more into coöperation and to raise the amount of the funds. The ladies' committee continues the internal management of the nursing arrangements. There are about *100 nurses employed in the different Calcutta hospitals and* about one lakh of rupees is required yearly. The Government has increased its subsidy from Rs. 37,500 to Rs. 50,000 per annum. During the past year the new committee has succeeded in largely raising the income of the institution, but it appeals for more support from the native community seeing that more than half the beds in the Medical College and Eden Hospitals are occupied by Indian patients.

April 17th.

VITAL STATISTICS OF JAMAICA.—In his report for the year ended March 31st, 1902, Mr. S. P. Smeeton, the Registrar-General of Jamaica, states that the population of the island as estimated to the date mentioned was 770,242. The number of marriages registered in the year was 3202, giving a rate of 4·1 per 1000 persons living, the number and rate for the previous year having been 3221 and 4 2 respectively. The births registered in the year numbered 31,268, giving a birth-rate of 40·9 per 1000. Of these births 20,022 were illegitimate, so that the illegitimacy rate was 64 per cent. of the total births, being the highest proportion recorded in the office. The Registrar-General here remarks that this is a very unsatisfactory sign taken with the fact that the marriage-rate for the year was, with the exception of the year 1897–98, less than at any time in the past 23 years One of the tables shows that during the ten years 1892–1902 in the 14 Jamaica parishes the lowest illegitimacy rate was 49 6 per cent. of the total births in the parish of St. Andrew in 1892–93, whilst the highest rate was 75·7 per cent. of the total births in the parish of St. Thomas in 1901–02. The parish of St. Andrew *must* be the most moral portion of the island, for it is the only one in which the illegitimate births seem never to have exceeded 54·3 per cent of the total. The deaths recorded in the year numbered 16,756, giving a death-rate of 21 9 per 1000. With regard to the causes of death, the largest numbers entered under any two headings were 3327 returned as "fever (undistinguished)" and 2005 returned as "other ill defined and not specified causes." Under "miasmatic diseases" 33 deaths were attributed to measles, 156 to influenza, 71 to enteric fever, and 6 to yellow fever. Of the total deaths in the year 13,358 or 79·7 per cent., were registered without any medical testimony as to the cause of death being obtainable The names of four practitioners were added to the Jamaica Medical Register, two deaths occurred, and 128 names remained on the Register on March 31st, 1902.

THE FOURTEENTH INTERNATIONAL CONGRESS OF MEDICINE.

(FROM OUR SPECIAL CORRESPONDENT.)

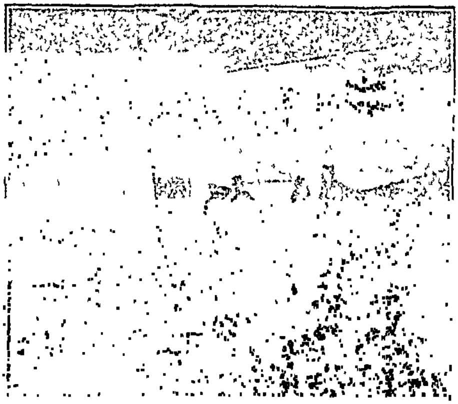
Madrid, May 1st.

As already mentioned in previous letters, much inevitable confusion prevailed on the morning of April 24th when the 16 sections met in the library and museum and attempted to get to work. To begin with, and in spite of posters and various other indications, it was no easy matter to find any one particular section, for the building is such a large one Three sections met in what might be described as in the basement, among exhibits of fossils, stuffed animals, elephants, crocodiles, tigers, crystals, minerals, and assorted butterflies Other sections met on the first or ground floor where there are appurtenances of the library, but the greater number were gathered together in the magnificent saloons devoted to the exhibition of modern paintings which are on the higher floor. A great number of chairs had been brought in and there was a long table provided in each section where the chairman or president sat, surrounded by the secretaries, presidents of honour, and other officials. But there were no press tables and such journalists as were present had to scribble as best they could on their knees. Each day a journal, the *Diario Oficial* of the Congress, was published, which for each section gave the names of the papers which were to be read. This, however, was but a vague indication, for so much depends on the length of the papers, the discussion that follows, and whether the authors happen to be present at the moment when they are called upon to speak. Not a little also depended on the fact whether the author and the chairman were able to understand each other. Through the difficulty of languages many mistakes were made, members going away when they ought to have remained or remaining when there was no necessity for doing so. One of the greatest hindrances, however, was due to the fact that in several cases it was impossible to reach one section without walking right across the rooms in which other sections met. This was particularly the case in the picture galleries and as there were not only the different sections to visit but also the magnificent pictures to look at the temptation to stroll from room to room was very great. Some of the pictures are justly celebrated, though others, it must be admitted, are scarcely worthy of being placed in such a magnificent gallery Nevertheless and considering that the museum was only concluded in 1896 the collections that have already been placed there are an honour to the country. But to admire these things was to neglect the Congress and to disturb somewhat the proceedings of the sections.

It must be confessed, however, that the work of the sections was often carried on before very small audiences The many empty chairs were silent witnesses to the number of desertions This is not surprising. The Congress being held at Madrid, the majority present were Spaniards and spoke in Spanish. There were very few foreign members who understood Spanish and the temptation was very strong for foreign members to get up and to look at the pictures instead of listening quietly to what was to them incomprehensible Add to this excursions to the Escorial and to Toledo and this supplies an ample explanation for the small number of foreigners who attended the meeting of the sections Others having papers in English or some language not likely to be understood by the majority of those present were sometimes content to get up, to bow, and as a matter of form to read the titles of their papers and then to present them to the chairman. Thus these papers will in any case be published in the report of the proceedings, where doubtless the foreign element will make a better show than it did in the sections and in person.

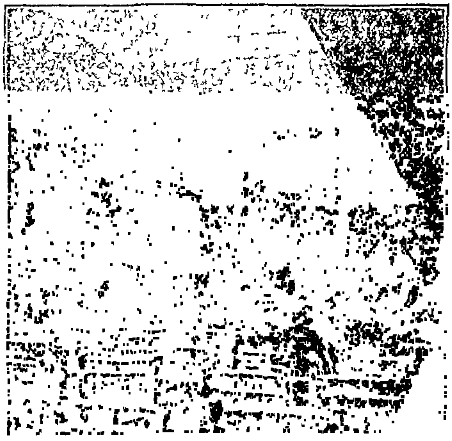
In regard to the pictures, some of them were not inappropriate. [illegible] butchery where surgical help wa [illegible] In the section of legal or foren [illegible] ge picture in which the figures are about life-size and which represents a duel. One of the adversaries has been shot while his enemy seems to be struck with remorse, a scene that suggests at once the need of prompt medical aid and of the intervention of the law. In the section of hygiene, on the other hand, there is a picture of young women enjoying a romp in an open field which is [illegible] on of medicine [illegible] in its centre [illegible] rs showed but little respect for the nude forms of the marble nymphs but placed hats and cloaks upon them in a most incongruous manner. The psychologists or neurologists secured a quieter though less attractive meeting place (Fig. 2). They raised around themselves a wall of glass cases containing precious manuscripts and the people who passed in and out of the room had to go by on the other side of this partition; however, few people attended this section. What with the insufficiency of light and the constant movement of the people present it was almost impossible to take a snapshot photograph of the sections. Nevertheless and in illustration of the above description I made a few attempts with more or less imperfect results.

FIG. 1.



Meeting of the Section of Legal Medicine.

FIG. 2.



Meeting of the Section of Neurology.

Madrid, May 2nd.

Apart from the ordinary sights, such as the magnificent collections of the old masters for which the picture galleries limited in number and easily arrived at. There were three which ought never to be omitted—namely, height, colour of the hair and eyes, and shape of the head. A uniform nomenclature ought to be adopted for the colour of the hair and eyes—namely, for the former fair, red, brown, and black and for the latter blue, grey of various shades (*verts, mélés ou gris*), brown, and black.

Dr. Double (Tours) read a paper on Variations in the Bones of the Human Skull. These variations might be divided into two principal classes—namely, (1) those which were reversive, theromorphic, and atavistic, or inherited; and (2) those which had no reversive character. A considerable list of reversive variations was enumerated affecting the occipital, parietal, frontal, ethmoid, sphenoid, and temporal bones. The variations devoid of reversive character were due, among other causes, to ossifications of the dura mater or fibrous ligaments, to the effects of pressure produced by vessels, nerves, meninges, tendons, and glands, to non-atavistic modifications of the form and size of the cranial bones and the appearance of supernumerary (Wormian) bones, to increase in the number of the normal points of ossification, to increased or diminished pressure of the brain and meninges, physiological or pathological dystrophy, and teratological variations.

Dr. Richard J. Anderson (Galway) read a paper on the Premaxilla in Apes, Bats, and Lemurs.

Dr. Unna (Hamburg) gave a demonstration (1) of Granoplasm and Spongioplasm (two protoplasmic substances) in the normal cells of different organs; and (2) of the "Schaumzellen" which were found in almost all œdemas and in many inflammations.

Physiology, Biological Physics, and Chemistry.

Dr. José Blanc y Benet (Barcelona) read a paper on Vegetable and Animal Life. He said that vegetative life had an existence in organised beings taken generally. Of all the differences between animals and plants the possession by animals of sensation and the power of voluntary movement and the absence of these faculties in plants had been in all ages considered as the most essential. In many cases, however, there were difficulties in deciding as to the presence or absence of these faculties. In the protozoa, for instance, no sensory organs had been discovered, neither could it be determined whether their movements were voluntary or not. There were some movements common both to living beings and to inorganic bodies, such movements being due to mechanical or physical causes, including endosmosis, capillarity, and Brownian movement. Other movements were due to the contractility of protoplasm and the phenomena presented by the sensitive plant and by insectivorous plants might be explained in this way: these movements were automatic and constant; they always repeated themselves in the same circumstances. Voluntary movements, on the other hand, presupposed spontaneity, knowledge, and choice. The difficulty of distinguishing between these different kinds of movement might be attributed to the imperfections of the methods of investigation. In conclusion, amœboid movements were discussed.

Dr. Agustin Murúa Valerdi read a paper on Organo-metalloid and Organo-metallic Medicines. In these preparations, he said, the chains of the organic molecules inclosed elements such as iodine, rubidium, zinc, arsenic, &c. He then proceeded to describe the preparation and properties of numerous compounds containing organically combined arsenic, especially cacodylic acid and cacodylates of metals, subjects upon which much work had been done in the chemical laboratory of the University of Madrid. He next engaged in a bio-chemical study of the therapeutic use of arsenic with especial reference to the views of Professor Gautier and to the properties of the glycero-phosphates which had some points of analogy to the arsenical compounds. His experiments on the toxicity of these substances were made in Dr. Ferran's Institute for Serum Treatment and Bacteriology in Barcelona. In conclusion Dr. Murúa gave a sketch of the literature of the organo-metallic compounds, including, in addition to those already mentioned, several preparations of phosphorus and silver.

Dr. Antonio Vidal (Buenos Ayres) read a paper on the Pathology of Heat-stroke. His principal observations were made during the "epidemic" of heat-stroke which occurred in Buenos Ayres and some other cities of the Argentine Republic in 1900. Dr. Vidal also read a paper on Biological Stereo-chemistry and Geometrical Conceptions of Space in their Biological Relations.

Dr. Richard J. Anderson (Galway) read a paper on Muscle Training or Moulding, at the outset of which he mentioned Sir Lauder Brunton's observation that the pose which was of so much significance in various mental states came to be of great service in supplying a key to the nerves that were concerned in some other peculiar conditions. Muscular action seemed to be the chief, if not the only, means by which animals first became acquainted with the phenomena of the external world. It was therefore important to consider how far this sense was independent of the other senses. Birds and reptiles probably derived little assistance from the senses of smell and taste There was early development of the sense of smell in mammals and of those of sight and hearing in birds, and in both (with some exceptions) the sense of touch was easily brought into action. The muscle sense was the chief and primary sense in all young mammals and in all birds probably. The other senses seemed chiefly to register the results.

Professor Juan Manuel Diaz Villar read a paper on experimentally produced pancreatic glycosuria. Complete removal of the pancreas in the dog produced hyperglycæmia and permanent glycosuria in from four to 24 hours after the operation, the animal ultimately dying from inanition. The operation was followed by loss of appetite and by uncontrollable vomiting; only an insignificant proportion of the food was digested, the greater part of it passing unchanged through the alimentary canal. Fat on being voided presented the same appearance as at the time of ingestion. The glycogen contained in the liver disappeared by conversion into sugar which passed into the blood and was wholly eliminated in the urine. The secretion of bile was diminished, the liver became pale, and bile pigment appeared in the urine. After eight days the appetite became voracious, the animal grew rapidly weaker, and its temperature fell to 35° C. Contrary to general opinion the liver took no part in the production of pancreatic diabetes; it gave up its stock of glycogen for conversion into sugar, but the hepatic cells were no longer capable of forming fresh quantities of this substance without the presence of the zymase which the pancreas supplied. The facts observed in experimentally produced pancreatic diabetes proved that the glycogenic process depended on the internal secretion of the pancreas. It therefore could hardly be doubted that the pathogeny of idiopathic diabetes was closely connected with more or less obvious changes in the pancreas.

General Pathology (including Pathological Anatomy and Bacteriology).

A paper by Dr. F. J. Poynton and Dr. Alexander Paine of London was communicated upon the Etiology of Rheumatic Fever. The work therein mentioned was a continuation and expansion of a research the results of which were published by Dr. Poynton and Dr. Paine in The Lancet.[1] That paper dealt with eight cases of rheumatic fever; the paper of which a *résumé* follows deals with 22 cases. The following is the abstract read at the Congress which was supplied for the use of members. The aim of this paper was to give in outline the result of a joint research by Dr. Poynton and Dr. Paine upon the cause of rheumatic fever. As a result of the investigation they concluded that a diplococcus was a cause of the disease. Before detailing the evidence in support of this conclusion they thought it advisable to state their conception of the disease which they were considering, a conception which was founded partly upon English clinical teaching. The early part of the paper was therefore concerned, firstly, with a clinical outline of rheumatic fever; secondly, with the reasons for the belief that it was a special disease; and thirdly, with reasons for the belief that it was an infective disease. They attached great importance to the clinical study of rheumatic fever, for this plainly showed that the disease was a widespread affection of many different organs and not a mere inflammation of the joints. If looked upon as a mere inflammation of the joints the characters which made the disease a special one would almost certainly be overlooked. The strong hereditary tendency, the grouping of the cardinal lesions, the especial frequency of inflammation of the heart, and the relapses were evidence in favour of the specific nature of the disease. Further, the constancy of the pathological lesions, the nature of which could usually be foretold from the clinical symptoms, pointed to the same conclusion. Granted that rheumatic fever was a special disease it was also clear that it was one of a group of closely allied conditions and on account of this they had felt that the postulates laid down by Koch must be rigorously satisfied before any bacterium could be claimed to be a cause of the disease They had isolated a diplococcus from 22 cases of rheumatic fever and had demonstrated it in the principal lesions They had grown it in pure culture and produced by intravenous inoculation into rabbits identical lesions from which in turn they had isolated the bacterium and in which they had demonstrated its presence They therefore held it to be a cause of the disease and did not believe up to the present that any other bacterium had been proved to be a cause The morphological and cultural characters were next described It was a minute diplococcus streptococcal in liquid media staphylococcal in arrangement on solid Acid milk and bouillon and blood agar were suitable media It could be cultivated aerobically and anaerobically The virulence appeared to be low and very difficult to raise but was constant for long periods on suitable media They knew of no specific test for the diplococcus, but did not think that for this reason it should be grouped with allied micrococci as a variation of a hypothetical primitive streptococcus It produced they held a special disease and was to this extent a special organism having possibly obtained this specificity by a process of evolution They alluded to the far reaching researches of Marmorek Aronson Fritz Meyer, and others on these difficult problems The diplococcus was, Dr Poynton and Dr Paine thought, the excitant of the disease heredity, cold damp over fatigue, &c , were predisposing factors to its activity in the tissues In conclusion they pointed out that the elucidation of rheumatic fever had been, and was the outcome of very many investigations In their previous writings they had quoted many names Klebs, Popoff and Leyden and Triboulet and Wassermann had described what they thought to be an identical diplococcus before they (the authors) had published any writings upon the subject but they thought that they had in this research proved the etiological relationship of this diplococcus to rheumatic fever

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[1] The Lancet, Sept. 22nd, 1900, p. 861 et seq.

NEUROLOGY, MENTAL DISORDERS AND CRIMINAL ANTHROPOLOGY

Dr H GUTZMANN (Berlin) read a paper on Neurasthenia and Impairment of Speech the latter being classified as (1) loss of memory and loss of faculty of association of ideas (akataphasia akatagraphia and amnesia), and (2) spasm or ataxy of the organs concerned in voice production (lisping stammering, and speaking in a whisper) The first of these two improved under general treatment directed against the neurasthenia , the impairment of speech ought to be treated by special exercises

Dr FLETCHER BEA [illegible] paper on the Care and Treatment c [illegible] le said that although epilepsy ha [illegible] of Hippocrates it was only 14 years since the first establishment in England for the treatment of these patients was opened. In asylums or colonies of this kind two classes of patients have to be provided for—namely, sane epileptics and insane epileptics For the former there were an asylum at Maghull near Liverpool the Meath Home (for females) near Godalming and a colony at Chalfont, at which latter place a second colony was in cour e of formation The law relating to the care of epileptic and defective children in England was an obstacle to the creation of asylums for children but Dr Beach was hopeful that the enactments limiting the number which could be received in an asylum would be modified

Dr FRENKEL (Heiden, Switzerland), read a paper on the Efficacy of "Re education in the most Advanced Cases of Locomotor Ataxy

Dr MANUEL IGLESIAS Y DIAZ (Madrid) read a paper on Pseudo Criminal Lunatics in Spain meaning thereby persons who being already insane were guilty of legally punishable acts or omissions and persons who became insane either while before the courts or after conviction During the last five years there had been 472 cases in Spain—i.e , about 94 per annum and one in 192 441 of the population Biscaya was the province in which the proportion of these lunatics was highest—namely, one in 9442 of the population The usual age of these lunatics was from 20 to 40 years , most of them were of the labouring class , their offences were principally infliction of bodily injury, homicide, parricide discharging firearms threats, incendiarism and wilful damage About one fourth of them were given up to their friends as guilty of minor offences , the remainder were required by law to be kept in the ordinary lunatic asylums There were, however several objections to this practice and a much better arrangement would be to have lunacy pavilions attached to prisons

Dr MANUEL IGLESIAS Y DIAZ also read a paper on Insanities of Toxic and Infectious Origin the most important exciting causes being alcoholism and influenza

Dr L VON FRANKL HOCHWART (Vienna) read a paper on Pseudo sclerosis (Westphal Strumpell) giving the history of a case which he had observed for 11 years The patient a male died from cancer of the stomach at the age of 42 years At the necropsy the only discoverable lesion of the brain and spinal cord was the existence of a considerable number of granulations of Pacchioni Dr von Frankl Hochwart gave several reasons for dissenting from the opinion held by the school of Charcot that pseudo-sclerosis was a manifestation of hysteria Pseudo sclerosis naturally resembled multiple sclerosis in many respects but several symptoms of frequent occurrence in the latter were very rare in the former as for instance the diminution of the reflexes nystagmus, disorders of the senses of sight smell taste and hearing paralysis of the face and the velum palati and finally incontinence of urine and fæces On the other hand mental disorder was often very marked in pseudo sclerosis The differential diagnosis between pseudo sclerosis and diffuse sclerosis was then discussed

Dr VICENTE OTS (Madrid) read papers on (1) Loss of Will Power and of Female Modesty after Hypnotism , (2) the Diagnosis Prognosis and Treatment of Mental Disorders of Infectious Origin , (3) on the Relation of Atmospheric Humidity and General Paralysis , and (4) on the Mental Condition existing in Dementia Præcox.

Dr JERÓNIMO GALIANA (Madrid) read a paper on Insanities of Toxic and Infectious Origin dividing them into (1) inebriety affecting the mentally degenerate , and (2) mania associated with syphilis Mental degeneration was an important factor in the etiology of inebriety In some of the individuals belonging to this class alcohol produced the condition known as pathological intoxication in which the mental state of the victims approximated in some degree to that of epileptics In these cases terminal dementia appeared early and had the special characteristic that while the failure of mental power was well marked the bodily strength was fairly well preserved In ordinary drunkards the terminal dementia was late in appearing and was apt to be associated with a group of symptoms which somewhat resembled those of general paralysis and has been named alcoholic pseudo-paralysis With respect to the relation between insanity and syphilis Dr Galiana said that the syphilitic psychoses properly so called were always the result of specific cerebral lesions In these cases the dementia and the delirium had no distinctive characteristics and similarly with regard to the motor affections which were no more than ordinary manifestations of cerebral syphilis The motor affections might consist in paralysis convulsions trembling movements and impairment of the faculty of coordination The relations of syphilis to general paralysis deserved separate mention It was well known that a considerable proportion of general paralytics had been the subject of syphilis and Dr Galiana had seen many such cases He had, however also seen general paralytics who to judge from the available data had not suffered from syphilis and he had known one general paralytic who contracted syphilis when his cerebral disorder was already well developed, thereby demonstrating his freedom from syphilis during the onset of the paralysis Dr Galiana is therefore of opinion that general paralysis is not essentially a disease of syphilitic origin

PATHOLOGY

Dr JUAN MANUEL MARIANI (Madrid) communicated several papers to this section We give abstracts of two

Blisters in the treatment of pneumonia —Blisters produce local effects which are both decongestive and exudative. They bring about nervous reflexes which increase the amplitude of the respiratory wave They increase phagocytosis and in all probability the cantharidine which is absorbed acts directly upon the pneumococcus or else by stimulating phagocytosis it increases the defensive powers of the organism

The treatment of anæmia by enemata of blood —Blood injected into the intestine is almost totally absorbed petition to the public health committee of the Lancashire County Council asking that if a preservative is allowed to be used in potted shrimps the maximum amount to be so used should be determined by Act of Parliament. It appears that the recent trial in Manchester of a case commented on in THE LANCET of April 4th has "prejudicially affected the sale of the genuine freshly potted shrimps, thus depriving the fishermen at Morecambe and other places of a considerable source of revenue." The public health committee has recommended the county council to ask the County Councils' Association to bring before the Local Government Board "the desirability of that Board determining whether any preservative should be used in potting shrimps, and, if so, of Parliament fixing the maximum amount allowed to be used" and of providing a distinctive label so that a purchaser might know that he was not buying freshly potted shrimps. Hygiene and commerce are becoming closely intertwined.

Midwives and Infant Death Certification.

Referring to the above-mentioned subject once again, Mr. Aitken, the acting coroner for Manchester, continued on April 21st his inquiry into the certification of the death of infant children by midwives. He said that he had been furnished with figures showing that 338 stillborn children were buried in Philip's Park Cemetery during the last 12 months and that if the other Manchester cemeteries were credited with burials on the same basis it might be calculated that about 1500 stillborn children were buried in the course of the year. "We have not a single guarantee that every one of these has not lived," he said. The law put it into the power of an unscrupulous woman to declare children stillborn simply on her own certificate. Dr. J. Niven, in his report for 1900, had noted the fact that whether the country as a whole is taken or the city of Manchester there is a steady decrease in the birth-rate, whatever the fluctuations of the marriage-rate may be. And he goes on to say that "it would seem from the figures as if there were some causes at work producing a lower birth-rate other than variations in the prosperity of the community." Mr. Aitken said that, taking the number of stillborn children at 1500, they would be in the proportion of 1 in 12 to the registered births. The matter came before the parks and cemeteries committee of the corporation on May 1st, when Mr. Aitken's calculations were not accepted as accurate. The 338 interments of stillborn children in Philip's Park Cemetery were reduced by 10 and those at the Southern Cemetery were given as 63. "Under these circumstances, the committee concluded—the officials of the cemeteries agreeing—that there were not more than 500 burials of stillborn children at all the cemeteries in one year." The drop of two-thirds is pretty considerable but it may be feared that mathematical accuracy has not been attained and the number of stillborn—or so-called stillborn—children buried in the Manchester cemeteries is not known within somewhat wide limits. As to the 500 that the parks and cemeteries committee would allow—"the officials of the cemeteries agreeing"—the report concludes: "This, of course, is a large number." Many witnesses were examined by Mr. Aitken, but not on oath, one of whom produced her own certificate, but it was merely a statement that she had "attended lectures" Stricter supervision is desirable, for whether Mr. Aitken's estimate or that of the committee be correct, the number of stillbirths seems too high.

May 5th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Liverpool School of Tropical Medicine: the Expeditions to the Gold Coast and Sierra Leone.

DR M. LOGAN TAYLOR has just returned from taking charge of the expeditions of the Liverpool School of Tropical Medicine at the Gold Coast and Sierra Leone. Dr. Taylor was sent to the Gold Coast a year ago in consequence of some rather alarming rumours as to the health of Europeans in that colony. He then drew up a set of recommendations for the improvement of the sanitation in the town of Cape Coast Castle, which were taken in hand immediately by the Governor, Sir Matthew Nathan. Dr. Taylor returned to Cape Coast Castle in November last with instructions to investigate the causes of the ill health on the Gold Coast and also to assist the Government in carrying out the recommendations which were drawn up a year ago. Dr. Taylor's engagement with the Liverpool School terminated early in February, but he was retained some time longer by the Gold Coast Government until Mr. G. L. Barker, assistant colonial surgeon, could arrive in Cape Coast Castle. Mr. Barker worked with Dr. Taylor on his previous visit to Cape Coast Castle, and on Dr. Taylor's recommendation the governor sent him back to Cape Coast Castle, on his return from leave in March, to carry on the work there. In an interview in Liverpool Dr. Taylor stated that very effective steps were being taken by Sir Matthew Nathan to improve the sanitation of the principal towns on the Gold Coast—viz., Accra, Cape Coast Castle, and Sekondi—and that proper sanitary departments had been instituted in each of these towns for the special purpose of carrying out much needed reforms. Sir Matthew Nathan had gone into the whole matter most carefully with Dr. Taylor. The conditions of health on the Gold Coast and other West African colonies were always fluctuating, and while they might be comparatively good in one district on the other hand they might be very bad in others. Cases of blackwater fever, remittent fever, and dysentery were constantly occurring, especially in the rainy season. Dr. Taylor was very hopeful that in the towns, at any rate, the new steps which are now being taken would have the effect of minimising as far as possible the chances of illness. He spoke very highly of Sir Matthew Nathan's interest in the whole subject and determination to leave no stone unturned to bring about a better state of health on the Gold Coast. Whilst on this expedition Dr. Taylor took the opportunity of visiting Freetown, Sierra Leone, and of winding up the fifth expedition of the Liverpool School of Tropical Medicine, which has been in operation there for a year and nine months. The majority of the men connected with this expedition ceased work last August, but a gang of 12 men was kept on for experimental purposes in the Grassfield district until the end of March. Freetown was chosen as a suitable place for testing the value of Major Ross's discoveries. Dr. Taylor expressed himself entirely satisfied with the results of the experiments carried on there It must not be forgotten that the practical sanitary work undertaken by Dr. Taylor and his assistants was not intended to be of an everlasting nature or to vie with the work on similar lines by a practical engineer. The object of the expedition was to clear up the town at once in the best possible way with the money at its disposal and the Liverpool School of Tropical Medicine had never felt that it was its duty to make the work permanent or even to keep it in an efficient state from year to year. This was a duty devolving upon either the Colonial Government of Sierra Leone or the Freetown municipality. Dr. Taylor, however, stated that Sir Charles King-Harman was showing great interest in the whole question and he expressed confident hope that although the Liverpool School of Tropical Medicine was no longer going to continue the work of this expedition the money spent by the school would not be wasted, as the Government was fully alive to the advantages arising from practical action on the lines advocated by the school. £2000 had been set aside this year for drainage work in Freetown and the worst streets were being dealt with first. The new water-supply for Freetown was now nearing completion and it was expected that by this time next year the mountain railway would be finished and the bungalows for the European officials completed.

The Opening of the Johnston Laboratories at University College, Liverpool.

The Right Hon. Walter Long, M.P., the President of the Local Government Board, will on Saturday perform the interesting ceremony of opening the new laboratories at University College, Liverpool. The laboratories are the munificent gift of Mr. William Johnston of Liverpool and they will be entirely devoted to research work in biochemistry. The event is very justly looked upon in Liverpool as one of no small moment, as the Johnston laboratories are the first of their kind constructed in Great Britain. The opening ceremony will be graced by the presence of several distinguished scientists from the continent, notably from France, Germany, Italy, and the United States of America, as well as by that of eminent visitors from this country. The new laboratory is a link in a continuous chain of developments. Together with the Thompson-Yates laboratories the new building will constitute and for the present complete the research department of the school of medicine. In the new department, which in buildings and equipment has cost upwards of £20 000, four professors will carry on their work. On the ground floor is the School of Tropical

Medicine, directed by Major Ronald Ross, F R S , late I M S There is here accommodation for 40 students Everything in relation both to tropical sanitation and to the study of malarial bacteria is at hand The professor himself is provided with a commodious room for his investigations The students who will work in this department are those who are specialising in tropical medicine after having acquired the general principles of medical science On the first floor Dr A S F Grunbaum will have the oversight of a branch of research concerned more immediately with cancer and kindred diseases A feature of this department will be a set of apparatus combining all the latest applications of electricity to the cure of that disease As in the case of the School of Tropical Medicine the work will be in the main of a post graduate character The cancer research department owes its foundation to the recent donation of £10 000 by Mr T Sutton Timmis, the material for which will be chiefly supplied by the Royal Infirmary On the top floor Professor Benjamin Moore is to carry on a school of bio chemistry, devoted to the investigation of that still obscure subject the chemistry of the animal tissues The chair of bio chemistry is a new one to which Professor Benjamin Moore has been recently appointed In each case there is a professor s room overlooking the quadrangle. Space has been found in the basement for the department of animal pathology directed by Dr H E Annett It is interesting to note that in association with this work the college has at Runcorn a station for the supply of the vaccine of small pox and diphtheritic antitoxin Meanwhile the work carried on in the Thompson Yates laboratories by Professor Rubert W Boyce, F R S , and Professor C S Sherrington, F R S continues to grow There has been fitted up a power room unique of its kind The municipal bacteriological laboratory has also been organised here as a separate department In Brownlow street, by the side of the Hartley botanical laboratory, the sites are in preparation for the buildings to be occupied by echnics In Ashton ected by Professor Lodge, is advancing towards completion Midway between these points the commodious structure which is in the near future to shelter the medical school has advanced as far as the first storey Before long there will crown the summit of Brownlow Hill the finest and most complete group of research laboratories in the kingdom although the foundation of the University College dates only from the year 1881

May 5th

WALES AND WESTERN COUNTIES NOTES

(FROM OUR OWN CORRESPONDENTS)

Small-pox

AMONG the large towns of South Wales there are cases of small pox only in Pontypridd (where there is one patient) and in Cardiff where six cases were notified during the week ending May 2nd During April there were 13 cases in Cardiff and during March there were 19 , in the first two months of the year only one case was reported In Merthyr there has been only one case of the disease since the end of January and Swansea has been entirely free for the whole of

situated in an isolated position and has been converted into a temporary hospital

Diphtheria in the Neighbourhood of Bristol

For several years past Mr J O Heaven of Bristol the medical officer of health of Keynsham rural district, has insisted upon the necessity for a bacteriological examination of material taken from the nares as well as from the throats of persons suspected of having diphtheria In the Keynsham district during the year 1902 of 20 bacteriological examinations which were made diphtheria bacilli were found in the throat only in 13 instances in the nose only six times and once in both nose and throat These records which are contained in Mr Heaven s last annual report support his contention that if diphtheria were systematically and universally fought by bacteriological examination of the noses and throats of ' contacts with a view of detecting those who while apparently well yet carry bacilli in the nose or throat to the danger of the community, a *very great step would be taken towards checking the spread* of the disease It is to be regretted that in Barton Regis rural district which also adjoins the city of Bristol the council has decided to rescind a resolution adopted in 1901 empowering the medical officer of health, Dr Edward Crossman, to obtain at the cost of the council a bacteriological examination in suspected cases of diphtheria. The only apparent reason for taking this retrograde step appears to be that 65 per cent of the swabs sent for examination gave a negative result and in the opinion of one member of the council this was ' fooling money away " At the meeting of the council held on May 1st Dr Crossman reported a further outbreak of diphtheria and if the valuable assistance of bacteriological examinations is withheld from him a very grave responsibility will rest upon the council

Housing of the Working Classes

At the annual meeting of the Bristol Committee for Promoting the Better Housing of the Poor, held on April 30th, Mr Lewis Fry said that without waiting for legislation it was extremely important that the powers possessed by local authorities should be enforced with more activity and vigour than is the case at present especially in rural districts As a remedy for the overcrowding and bad condition of houses in towns Mr Fry advocated the cheapening of locomotion and the removal of large industrial undertakings into rural districts

Death of Mr William Hughes, M R C P Irel , M R C S Eng , L S A

The announcement of the sudden death of Mr William Hughes, on May 3rd came as a painful surprise not only *to* the medical profession of Cardiff but to the towns people generally, for during the past 30 years he has been one of the best known figures among those engaged at Cardiff Docks He was born in Pembrokeshire and was a brother of the late Professor Hughes of Lampeter College After studying at the Middlesex Hospital he became qualified when about 25 years of age as M R C S Eng and ten years later came to assist Mr Hallam M Dixon who was at that time medical superintendent of the Seamen s Hospital ship *Hamadryad* Before the end of 1873 Mr Dixon died and Mr Hughes was appointed as his successor, a position which he held at the time of his death In 1874 he took the diploma of L K Q C P Irel., and in 1886 was elected a Member of that College Mr Hughes was most devoted to his work and although he was anticipating with pleasurable feelings the removal of the hospital to the new buildings now being of the work which *Hamadryad* The very much attached kindly sympathetic is distinctly the poorer through his death He is survived by his widow and one son.

Royal Mineral Water Hospital Bath

The annual court of the governors of the Royal Mineral Water Hospital was held on May 1st The report stated that 1201 in patients had been admitted during the year ending April 30th 1903 Since March, 1900, there had been 112 soldiers admitted to the hospital suffering from illness contracted during the war in South Africa The financial statement showed that the income for the year amounted to £7180 The expenditure amounted to £6017, which includes £523 the final payment on account of the extensive sanitary improvements which have been recently carried out in the building

Sanitary Inspectors Association

The western branch of the Sanitary Inspectors Association held its annual meeting at Falmouth on April 25th, when Mr C O Bullmore medical officer of health of Falmouth, read an interesting paper on Light Mr H Kelway contributed Items from an Inspector s Notebook giving a *résumé* of sanitary improvement carried out in Falmouth during the past few years Mr Kelway stated that as a result of the house to house test of drains 90 per cent of the systems had been modernised , this was brought about with a minimum amount of friction legal proceedings having to be resorted to on only two occasions. The mayor (Dr W Banks) afterwards entertained the members of the association.

May 4th

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Outbreak of Small-pox in Dublin.

THE outbreak of small-pox in Dublin has not assumed serious dimensions, being practically confined to an infected area in the north, the most crowded district of the city. The fact, however, seems due rather to good fortune and to the labours of general practitioners in zealously revaccinating the citizens during the last two years than to any really intelligent precautions emanating from the corporation. The case of Mr. Peckin, a corporation official in connexion with the cleansing and disinfection of clothes department—who died from small-pox, unvaccinated, and after three days' illness—has already been noticed in THE LANCET. Dr. F. J. Dunne, in a letter to the guardians of the South Dublin union, reported the case of a man employed at or near the Isolation Hospital at the Pigeon House Fort who had not been vaccinated. The superintendent officer of public health mentioned that two workmen who came from England refused to be revaccinated. One of the guardians inquired why in such circumstances he was retained at the hospital to the obvious danger of his fellow labourers. Other somewhat similar cases have been reported. An evening paper has stated in a leading article that at a house-to-house visitation made by the health officers during the week ending May 2nd no less than nine cases of variola were discovered in the infected area. They had been concealed and one of them was convalescent presumably after three weeks' illness.

Belfast Board of Guardians.

At the usual meeting of the Belfast board of guardians held on April 28th a report from the infirmary committee was presented recommending that the guardians should hire a house in a suitable locality within a radius of six or seven miles of Belfast to accommodate from 20 to 30 consumptive patients in the early stage of the disease. There are five wards filled with consumptives and the number was rapidly rising from 200 to 280. Last year 1100 persons died from consumption in Belfast and the medical officer of health of Belfast estimated that at present 4500 people were suffering in that city from the disease. It was decided after discussion to send the report back to the committee for the purpose of ascertaining what action might be contemplated by the city corporation and to make such further recommendations as it might think fit.

The Irish Medical Association.

At a meeting of the North Down Branch of the Irish Medical Association, held on April 30th in the Medical Institute, Belfast, Dr. F. P. MacLaughlin of Strangford presiding, the following resolutions were unanimously passed :—

> That the annual holiday leave to infirmary, dispensary, workhouse, prison, and asylum medical officers be one month free of cost to them.
>
> That the salaries paid to medical officers of health are inadequate.
>
> That it be urged on the profession that no doctor should accept a dispensary appointment under £200 per annum or workhouse under £120.
>
> That no medical man should interfere with, or take any position rendered vacant by, any medical officer, on his resigning office with a view to obtaining a salary approved of by the Irish Medical Association.
>
> That no medical man should under any circumstances apply for or accept any medical appointment when the outgoing medical officer, if entitled to same, has without just cause been refused superannuation.
>
> That we object to the scale of fees under the Factory Acts and to the Acts making these compulsory on dispensary doctors.
>
> That a fee should be paid for the examination of harmless pauper lunatics.
>
> That the following should be the minimum fees for temporary duty :—Dispensaries, four guineas and workhouses three or three and a half guineas per week or one guinea each per day.
>
> That Sir Wm. Whitla be elected first president of the North Down Branch of the Association, with Dr. Olpherts as honorary secretary.

A motion was also passed congratulating Mr. J. P. O'Riordan of Rathcoole on his recent victory in the courts over both the Celbridge guardians and the Local Government Board. Votes of thanks were also passed to the professors of Queen's College, Belfast, the medical staff of the Royal Victoria Hospital, and the chairman.

Death of Mr. George Gray, M.D. R U.I., J.P.

I regret to announce the death of Dr. George Gray, J.P., which took place at his residence, Newcastle, co. Down. on April 27th, from heart disease and glycosuria. Dr. Gray was born at Sheepbridge in co. Down and was educated at Queen's College, Belfast, which he entered in 1862, and in which he was a medical scholar in sessions 1864–65 and 1865–66, when he graduated as an honours man in the late Queen's University. At the Royal Hospital, Belfast, he obtained the Charter's exhibition and the Malcolm exhibition. Thoroughly trained and equipped as a young medical man he began practice in Castlewellan and subsequently removed to Newcastle, co. Down, where he enjoyed a large and lucrative practice and was greatly beloved and respected by his patients. In 1896 he was elected President of the North of Ireland Branch of the British Medical Association, of which for many years he was treasurer. Dr. Gray, who was a justice of the peace for the county of Down, contributed several articles to the medical journals and was a most careful and highly educated medical practitioner. He was buried at Newcastle on May 1st amid many evidences of the esteem in which he had been held by all sections of the community.

May 5th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Death of Dr. Laborde.

THE Paris Academy of Medicine has sustained a severe loss by the death of Dr. Laborde who passed away recently at the age of 72 years after a very full and busy life. A born physiologist he was well known by his work. He took a particular interest in the study of the functions of the nervous system and some years ago he discovered a system of re-animating those apparently dead from asphyxia by means of rhythmical tractions of the tongue. This method has become widespread and made his name well known. Latterly he had been much to the fore on account of the prominent part which he took upon the alcohol question as debated in the recently held discussions at the academy. His death is universally regretted.

Ablation of both Uterus and Ovaries in Osteomalacia.

At the meeting of the Academy of Medicine held on April 14th M. Fochier of Lyons related the following case. The patient was a woman in the fourth month of pregnancy who suffered from osteomalacia and in whom death seemed very near. M. Fochier thereupon removed the uterus and the ovaries and two and a half months later the osteomalacia was considered as quite cured. The rapid amelioration which took place in this case led M. Fochier to propose ablation of the uterus and ovaries as the treatment of election in osteomalacia, even when pregnancy was not present. M. Guéniot, however, considered that so far as his own experience went it would suffice to do a Cæsarean operation to terminate the pregnancy in cases of osteomalacia. This would have the advantage of allowing the woman to become pregnant again.

Technique in Rhinoplasty.

At the same meeting of the Academy of Medicine M. Nélaton described a proceeding in the operation of rhinoplasty which consisted in using the cartilage of the eighth rib to form the foundation of the nose. The operation is done in two stages at an interval of two months. In the first stage the cartilage of the rib is taken and inserted under the skin of the forehead whence the flap for the new nose is to be taken. Two months later the skin flap fitted with the cartilaginous skeleton of the nose is turned down and fitted into place. In two cases M. Nélaton had obtained good results by this method.

The Prophylaxis of Tuberculosis in Prisons.

The Prisons Board has laid before the Academy of Medicine a scheme for the prevention of tuberculosis in prisons, based upon the use of spittoons. M. Landouzy approved of the provisions of the scheme except in so far as regarded the cleaning of the spittoons *in loco*. He further suggested the use of lysol in the spittoons.

May 6th.

SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

Parturition and Lesions of the Eye.

DR. SIDLER, lecturer *(privat-docent)* on ophthalmology at the University of Zürich, has lately published some cases of lesions of the eye of newly-born infants occurring during parturition. Such cases are scarcely mentioned in handbooks of ophthalmology or obstetrics, but they deserve mention as they have a medico-legal bearing and interest the medical practitioner. Dr. Sidler excludes all cases due to the pressure of midwifery forceps applied *sine arte;* these occur not so very rarely but are seldom published. Some cases are on record which took place during normal parturition. Bock lately referred to such a case where one eye was completely forced out through rupture of its muscles. Hofmann published a similar occurrence as far back as 1854. Retinal hæmorrhages occur with great frequency. Königstein observed them 29 times out of 281 cases and Schluch in 49 cases out of 150 (a percentage of 33). Dr. Sidler gives detailed descriptions of seven cases which he has had occasion to examine.

Pasteur Institute at Berne.

The anti-rabies institute at Berne organised by the Swiss Federal authorities under Professor Tavel some years ago has treated 31 cases during the year 1902. In 20 of these patients the diagnosis of rabies was based on the experimental investigations of this useful institution. In three cases the veterinary surgeon had diagnosed the disease and in seven cases rabies was suspected; in one instance preventive inoculation was performed. The results were very satisfactory as all the persons inoculated remained in good health and free from rabies. 27 persons came from the canton of Vaud (Lausanne, Vevey, and Tour de Peiltz) and the other four patients from Berne, Neufchâtel, and Tessin. Out of 15 dogs and three cats sent for investigation 12 dogs were proved to be suffering from rabies.

Small pox.

Owing to the strenuous efforts of the Swiss sanitary authorities there have for many years been only isolated cases of small-pox in Switzerland and epidemics of a dozen or so cases have never spread, although a great number of children are not vaccinated, since certain cantons have disregarded medical advice and done away with compulsory vaccination. The *vox populi* turned a public health question into a political one and voted that every Swiss should be free. When any case of small-pox occurs it means a great amount of work for the district medical officer (*Bezirksarzt*) and heavy expenses for the Confederation. The patient is immediately sent to the nearest small-pox hospital, the names and addresses of all the persons with whom he had been in contact for the previous fortnight are noted down, and these—often a couple of dozen people—are at once placed in isolation hospitals, where they remain for a fortnight, then the relatives of these isolated persons are visited every day in case they should show suspicious symptoms. Thus any single case of small-pox may cost the Swiss authorities £100 or more, as the isolated members of the community are paid their wages for the time during which they are isolated. A small focus of infection has suddenly turned up in Maamedorf with 16 cases, but every possible precaution having been taken it is hoped the infection will not spread. Delay in making the diagnosis was the reason of the spread of the small-pox in this instance.

Zurich, April 30th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Increase of the Medical Corps of the United States Navy.

THE Fifty-seventh Congress of the United States in its last session provided for an increase of 150 members in the medical corps of the navy, 25 of whom are to be appointed each calendar year for six years. The number of vacancies in this corps occurring from resignations, retirements, and casualties average about ten a year which, added to the 25 created by new legislation, makes 35 appointments open to young medical men yearly. These appointments are to be made in the grade of assistant surgeon and are within reach of any well-qualified physician between the ages of 21 and 30 years who is a citizen of the United States. The medical corps of the United States navy consists to-day of the following numbers and grades: one surgeon-general with the rank of rear-admiral; 15 medical directors with the rank of captain; 15 medical inspectors with the rank of commander; 85 surgeons with the rank of lieutenant commander; 23 passed assistant surgeons with the rank of lieutenant; 56 assistant surgeons with the rank of lieutenant, junior grade, with 152 vacancies. There are 27 vacancies in the grade of assistant surgeon for the year 1903. Assistant surgeons, after three years' service as such, will be eligible for promotion to the next higher grade. The pay ranges from assistant surgeons, at sea, $1650 (£330), on shore, $1402 50, (£280 10*s.*); to medical directors, at sea, $4500 (£900), on shore, $3825 (£765), with ample allowances when quarters are not furnished by the Government The pay of the surgeon-general is at sea and on shore $5500 (£1100). The prospects of promotion are good owing to the numerous vacancies in the grades of passed assistant surgeons and assistant surgeons.

Bills Relating to Medicine and Sanitation in New York State.

On April 21st the New York State Senate passed the last of the Child Labour Bills framed by the Child Labour Committee. It amends the penal code so as to provide penalties for false statements in connexion with the employment of children. On April 21st the New York State Senate passed Senator Plunkitt's Bill amending the New York City Charter with reference to the street-cleansing department. The New York State Nurses' Association met in Albany on April 21st. It discussed the Bill providing a board to examine and to license trained nurses in New York State which has passed both branches of the legislature. At the close of the afternoon session the delegates called on Governor Odell and requested him to sign the Bill. He said that the measure had not reached him but that when it did he would give it his earnest consideration. The Bill creating a commission to investigate the condition of the adult blind in New York State passed the Assembly on April 21st. Its chief object is to provide methods whereby the adult blind of the State may be taught trades.

Professor Mikulicz in America.

Dr. J. Mikulicz, the well-known professor of surgery of Breslau University, has been recently staying in New York. His object in coming to America is in response to an invitation to read a paper before the American Surgical Association at its annual meeting in Washington, D.C. Professor Mikulicz, on the invitation of Professor William M. Polk, dean of the Faculty of Cornell Medical College, held an operative clinic at Bellevue Hospital.

Laboratory Building to be erected in Manila.

A new building is planned in Manila to provide laboratory space for the chemical and biological laboratories and the serum institute. The building will be divided into 60 rooms [illegible] pitals, municipal physicians, board of health, police force, and other Government institutions as may have occasion for such services. As such work is quite extensive considerable space will be allowed for bacteriological diagnosis. The investigation of tropical diseases and the pathological changes brought about by them, both in human beings and in domestic animals, will require the construction of several rooms for the study of their causation and to accommodate pathology and physiology. The plans of the building have been drawn so as to accommodate all of the work within one building, one half of which will be occupied by the chemical and the other half by the biological laboratory. The capacity of the serum institute will be such as to supply the entire archipelago. Two houses for the accommodation of small animals are to be built in the rear of the laboratory building, one of which will be for the use of the laboratory proper and the other for the serum institute. An adequate library will be built in connexion with the laboratories. The building plans have reserved a space in a central location which will be capable of accommodating easily 30,000 volumes.

April 25th.

NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

British Medical Association: New Zealand Branch.

THE annual meeting of the New Zealand Branch of the British Medical Association was held at Nelson from

March 2nd to 7th, under the presidency of Dr. S. A. Gibbs of Nelson, there being present upwards of 30 medical practitioners from all parts of the colony. In the absence of Dr. D. Colquhoun of Dunedin, the retiring President, Dr. W. G. Collins of Wellington, took the chair and installed the President-elect. In commencing his address Dr. Gibbs referred to the loss which the medical profession had sustained by the deaths of Dr. G. Cleghorn (Wanganui), Dr. Deamer (Christchurch), and Mr. A. C. Milne (Woodville), and also by the removal of Dr. C. Graham Campbell of Christchurch, for many years the secretary of the branch, in which capacity his services had been of the utmost value. Dr. Gibbs then proceeded to discuss some of the difficulties surrounding the general practitioner in the ordinary routine of work, referring particularly to the great need of some provision for treatment of incipient mental disease.

The following papers were read during the week: Operation for Moveable Kidney (Dr. Collins, Wellington), a Peculiar Case of Inguinal Hernia (Dr. E. E. Porritt, Wanganui), Mouth Deformity in Early Childhood (Dr. Hatherly, Wanganui), a Case of Leucocythæmia (Dr. J. Mason, Wellington), Uric Acid in Relation to Disease and Easy Methods of Demonstrating its Presence (Dr. Mason), the Campaign against the Consumptive (Mr. Coker, Wellington), Collection and Storage of Rain for Household Purposes (Dr. F. I. De Lisle, Napier), Relation of the Profession to the Lay Press (Dr. W. Anderson, Blenheim), the Medical Profession in Relation to Climatology (Dr. J. Gunn, Kaikoura), New List of Diseases and Causes of Death (Dr. McAdam), Ventilation, More Ventilation for the Travelling Public (Dr. J. Hudson, Nelson), Human and Bovine Tuberculosis (Mr. Gilruth, chief government veterinarian), and a demonstration by Dr. J. P. Frengley of Nelson on Modern Sanitary Fitments, illustrated by models, diagrams, &c. The following motions were passed:—

> That this meeting respectfully urges the Government to place all the institutions connected with the treatment of mental and bodily diseases under one department and to make provision for advanced cases of tuberculosis by erecting annexes to our present hospitals.
>
> That this meeting wishes to draw the attention of the Government to the need of better ventilation on steamers and railway carriages and they would suggest that the regulations against overcrowding be strictly carried out.
>
> That in the opinion of this meeting the Government should compel the notification by the owner of all cases of diseased mammary gland in cows, the milk of which is used for human consumption.
>
> That this meeting strongly deprecates the attack which has been made upon the chief health officer and his assistants in Auckland while attempting to carry out the duties devolving upon them under the Public Health Act.
>
> The attention of the conference having been directed to the publication in various newspapers of the colony of a paragraph setting forth the astounding information that scarlet fever is not infectious during the stage of desquamation (peeling), it was unanimously resolved that, in the interests of the public health, the paragraph should be publicly contradicted as evidence is conclusive that scarlet fever is infectious during the whole course of the disease, including the peeling period.

A recent statement by Dr. Koch, that in his opinion bovine tuberculosis was not transmissible to the human being, was held to have been amply disproved by all the most eminent authorities. Numerous instances were given by the medical practitioners present of cases in which the disease had developed apparently from drinking the milk of tuberculous cows, the sufferers in some instances dying after a very short illness. The system of inspection of cattle and dairies which had been inaugurated by the Government would, it was hoped, be extended and made more regular. Animals proved to be diseased should, it was urged, be immediately slaughtered, and until it was possible to establish a more regular and more frequent inspection of dairies, if there was the slightest doubt of the purity of the milk it should be scalded.

Several very enjoyable social gatherings varied the business of the meeting, including garden parties, drives, picnics, a conversazione, and the annual dinner.

March 24th.

Obituary.

EDWARD MONRO SPOONER, M.D. ST. AND., M.R.C.S. ENG., L.S.A.

THE death of Dr. Edward Monro Spooner is announced after a short illness at Blandford, Dorset, on April 17th. Dr. Spooner was born in 1840 and was educated at Epsom College, the London Hospital, and University College. He took the L.S.A. in 1864, became M.R.C.S. Eng. in 1865, and in 1881 received the M.D. degree at St. Andrews University. He succeeded his father Dr. Edward Oke Spooner to a large and extensive practice at Blandford. He was surgeon to the Blandford Cottage Hospital, medical officer and public vaccinator to one of the districts of the union, certifying factory surgeon, and honorary assistant surgeon to the 1st V.B. Dorset Regiment. Dr. Spooner took a keen interest in his professional duties and was untiring in his devotion to his patients. He was a ready and witty speaker and was deservedly popular with his professional brethren and his fellow townsmen. His kindness of heart and genial manner endeared him to his patients and especially amongst the poor will his loss be deeply felt. He leaves a widow, one daughter, and two sons, the elder of whom is a member of the medical profession.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the First Examination of the Board at the April quarterly meeting of the examiners in the subjects indicated:—

Chemistry.—Edward Morison Adam, Charing Cross Hospital; Harold Wordsworth Leach Allott, University College, Sheffield; Raymond Ebenezer Apperly, Middlesex Hospital; Thomas Herbert Cecil Benians and Walter Joseph Berne, London Hospital; Robert Stanley Capon, University College, Liverpool; Bernard Arthur Cheadle, St. Th[illegible] Thomas Clarke and Edmund Victor [illegible] ege, Bristol; Gordon Comyn, King's [illegible] Leslie Councell and Llewellyn Etter [illegible] Liverpool; Hugh Galloway, Westmi[illegible] ohn Gillett, Guy's Hospital; William Edwin Haigh, Technical College, Bradford; Charles Arthur Hallett, Westminster Hospital; Alfred Hanau, St. Bartholomew's Hospital; Arthur Reginald Hardy and Sidney Harlock, [illegible] hnical Institute, Salford; [illegible] llege, Sheffield; Edward [illegible] James Eustace Jackson, [illegible] p, St. Mary's Hospital; John Alfred Laughton, Charing Cross Hospital; Christian Frederick Louis Leipoldt, Guy's Hospital; Raymond Gabriel Maglione, Owens College, Manchester; Alfred Cecil Martin, London Hospital; Philip Walter Mathew, Middlesex Hospital; Frederick [illegible] Reginald Mugliston, London [illegible] ollege, Leeds; George Frank [illegible] Rowland Mabbatt Peake, Middlesex Hospital; Charles James Meaburn Phillips, St. Thomas's Hospital; Charles Edwin Price, Guy's Hospital; Claud Mallinson Rigby, London Hospital; Alfred Basil R[illegible] London; Francis Charles Searle, St. [illegible] Richard William Starkie, Owens College, [illegible] Technical Institute, Salford; George Fre[illegible] College, Liverpool; John Nuthall Watso[illegible] Adolphus von Wertern [illegible] and Guy's Hospital; and David Ed[illegible] Cardiff.

Practical Pharmacy.—Ric[illegible] f Birmingham; Evelyn Addison [illegible] Hospital; Hugh Lawrie Askham, [illegible] d Bethell, B.A. Camb., Cambridge [illegible]; Bernard Richardson Billings, Lo[illegible] Bintcliffe, Owens College, Manchester; Frank Treadwell Boucher and Edmund Victor Connellan, University College, Bristol; Martin Binns Studer Button and George Martin Clowes, London Hospital; Herbert Hugh Blair Cunningham, St. Mary's Hospital; Charles Stuart Douglas, Owens College, Manchester; Mervyn Eager, King's College Hospital; John Jackson Whatley Evans, Westminster Hospital; Harold William Farebrother, Charing Cross Hospital; George Edward Ferguson and Stephen Field, St. Mary's Hospital; William James Fletcher, Owens College, Manchester; Charles Ashley Flintoff, Charing Cross Hospital; Edmund George Foote, Westminster Hospital; Harman John Howland Graves, L[illegible] Buskard Hambling, St. Bartholomew's [illegible] wynne Howell, St. Thomas's Hospit[illegible] Harold William Latham, London Ho[illegible] ick, University College, London; [illegible] College, Manchester; Mahmoud Maher, Cairo and Guy's Hospital; William Beare Martin, Owens College, Manchester; Herbert Edwin Middlebrooke, London Hospital; Brian Bentley Metcalfe, Charles Sculthorpe Morris, L.D.S. Eng., and Edward Haldane Paterson, Guy's Hospital; Robert Elliot Pitts and Timothy William Sexton, Middlesex Hospital; Reginald Reynolds, University College, Bristol; Arnold Shelley, B.A. Oxon., Oxford University and London Hospital; Thomas James Bell Thomas, St. Mary's Hospital; Richard James Campbell Thompson, St. Thomas's Hospital; Seth Tinsley, Yorkshire College, Leeds; Charles Weller, Birkbeck Institute; Hugh Wheelwright and Mathias Wilhelm Eberhard Widegren, St. Thomas's Hospital; Peter Bruce Whittington, London Hospital; Robert Horace Constable Owen Wisdom, Cambridge University and London Hospital; René William Louis Wood, Yorkshire College, Leeds; Walter James Wood, University College, London; and Fred Yates, St. Mungo's College, Glasgow.

Elementary Biology.—Edgar Cecil Banks and John William Bintcliffe, Owens College, Manchester; Henry Alfred Biden, King's College Hospital; Maurice Frederic Bliss, London Hospital; Owen

College Hospital; [illegible]
De Vesci Gibson, [illegible]
Hospital; Lorenz[illegible]
and Birkbeck Inst[illegible]
Hospital; Sydney [illegible]
Hurst Hadfield, [illegible]
Haigh, Bradford [illegible]
Charing Cross H[illegible]
Hancock, St. Bartholomew's Hospital; Joseph Cecil Harris, University of Birmingham; Samuel Richard Harrison, London Hospital; Philip Keith Hill, Yorkshire College, Leeds; Norman Stewart Hoare, St. Thomas's Hospital; Claud Anthony Holburn, University College, Sheffield; David McKenzie Hunt [illegible]

Tomlinson, University College, Bristol; Francis J.mes Tuckett, Birkbeck Institute; Gerald Douglas Hamilton Wallace, Charing [illegible] and George [illegible] n, Guy's [illegible]; Charles [illegible] University College, [illegible]

UNIVERSITY OF CAMBRIDGE.—On April 30th the following degrees were conferred:—

Doctor of Medicine.—J. G. Taylor, King's; A. C. Hill, Trinity; J. D. Sandilands, Trinity; W. M. Strong, Trinity; F. C. Shrubsall, Clare; and W. T. Mullings, Christ's.

Bachelor of Medicine and Bachelor of Surgery.—E. D. Macnamara, Peterhouse; G. D. Barton, Pembroke; and M. C. Hayward, Gonville and Caius.

Bachelor of Medicine.—C. de Lisle Carey, Emmanuel.

Bachelor of Surgery.—E. D. Telford, Gonville and Caius.

It is proposed to re-establish the professorship of surgery which has been suspended since the death of Sir George Humphry. The stipend is £600 a year. The professor will be eligible to a College fellowship and will be *ex-officio* surgeon to Addenbrooke's Hospital. He will be free to engage in private practice.

UNIVERSITY OF DURHAM.—At the Convocation held on April 25th the following degrees and diploma were conferred:—

Doctor in Medicine.—Reginald Alderson, M.B., B S. Durh.; Robert Hodgson Cole, M.B. Durh. (*in absentiâ*); Charles Edward Fenn, M.B. Durh.; Selina Fitzherbert Fox, M.B., B S. Durh., Lachlan George Fraser, M.B., B S. Durh.; John Tyrer Johnson, M.B., [illegible]

D[illegible] les [illegible] n, [illegible] as [illegible] an [illegible] .S. [illegible] ge
Wright Kemp Hector, L.R.C.P. & S. Edin., L.F.P.S. Glasg.; William Beeson Crawford Treasure, M.R.C.S. Eng., L.S.A.; and Herbert Leader [illegible]

Bachelor in Medi[illegible] rong, John Wilfrid Caton, [illegible] ric Dover, and Guy Rowl[illegible] stle-upon-Tyne; George [illegible] estminster Hospital; *Bryc*[illegible] ella Mary

Hankin, London School of Medicine for Women; Charles William Menelaus Hope, Hubert Wolstenholme Horan, Hugh Robert Kendal, Charles Robert Lease, and John Herbert McDowall, [illegible]

Tyne.

Bachelor in Surgery (B.S.).—Frederick George Armstrong, John Wilfrid Caton, Samuel Thomas Cochrane, and John Frederic [illegible]

B[illegible] es French, M.B., B S. [illegible] Durh., M.R.C.S. Eng., [illegible]

L.R.C.P. Garratt [illegible]

HEREFORDSHIRE GENERAL HOSPITAL.—For some years the Herefordshire General Hospital has been sadly in want of funds, and a large and energetic body of gentlemen have formed themselves into a committee with the idea of placing the institution on a sound financial basis. It is estimated that upwards of £4000 are required for the annual upkeep of the hospital and the revenue from all sources is about £3000 Towards the deficiency £400 have been already promised i[illegible] is now being made t[illegible] ity for the remaining [illegible] ass meeting was held in the Shirehall, Hereford, on April 25th, under the presidency of the Mayor (Mr. W. J. R. Symonds) and a resolution was unanimously adopted approving a proposal by which the workers of the county can supply the increased funds necessary to maintain the county hospital complete and effective in all its parts, and undertaking to use every effort to secure lasting and permanent success for the workers' monthly hospital penny scheme. Numerous lady collectors have been appointed and districts have been mapped out, and the proposal is for the ladies to call at each house monthly and to make a penny collection. If there is a response from only half the houses in the county the required amount will be forthcoming.

UNQUALIFIED PRACTICE; DEATH AND AN INQUEST.—An inquest was held on April 24th at the coroner's court, Kensington, on the body of Lieutenant-Colonel M. C. Garsia, C.B., commissioner of prisons, who died suddenly on April 20th. The evidence disclosed the following facts. On April 17th the deceased consulted a certain Mr. Dahkyl of 178, Holland-road, Kensington; the latter was a Greek who had studied medicine in Paris and described himself as "M.D., B.Sc., B.A. Paris, specialist for deafness, ear, nose, and throat diseases." Mr. Dahkyl provided the deceased with a number of different medicines for internal and external application, but it appeared that only the medicine described as the "compound resolutive syrup" had actually been taken by the deceased. Soon after taking this medicine Lieutenant-Colonel [illegible] unpleasant taste in his [illegible] day after commencing [illegible] r. Dahkyl complaining of his symptoms and saying that he believed that the medicine did not agree with him Shortly after writing this letter the deceased became much worse and Dr. Eric L. Pritchard was hurriedly called in, but a few minutes after his arrival the deceased became unconscious and soon afterwards expired. The post-mortem examination proved that the deceased's kidneys were in an early granular condition, that his heart was hypertrophied, and that the aorta and aortic valves were in a condition of atheromatous degeneration, while a large pulmonary infarct was apparently the cause of death. The coroner, Mr. C. Lux [illegible] from any blame in [illegible] of care or skill, d[illegible] present, which allows an unregistered practitioner to pursue his calling in this country without let or hindrance. As the case above recorded shows, a family was plunged into all the unpleasantness of a public inquest owing to the fact that the deceased had been treated by a practitioner who was not legally qualified in this country and who could not consequently provide a death certificate.

Royal College of Physicians of Ireland.—At a special meeting of the President and Fellows, held on April 24th, the following gentlemen were admitted to the Membership of the College: Dr. J. A. Matson, Dr. T. P. C. Kirkpatrick, and Dr. F. C. Purser.

In reference to an annotation in The Lancet of April 25th, p. 1181, in regard to "Dishes for Invalids in Hotels," our attention has been drawn by Messrs. Callard and Co. to the fact that they have for some years at their restaurant at 65, Regent-street, London, catered for invalids. "We make," they say, "a speciality of dishes which are free from starch and sugar, so enabling patients suffering from those diseases in which carbohydrates are contra-indicated to obtain suitable meals without fear of transgression."

Memorials to Medical Men.—For the purpose of providing a memorial to Dr. William Sanderson Wyman who died in Putney about 12 months ago a subscription was started by several local gentlemen. The appeal was readily responded to and a carved oak pulpit has been purchased and erected in St. John's Church, Putney-hill.—A marble bust of the late Dr. Patrick Miller of Exeter, with pedestal, has been presented to the Royal Devon and Exeter Hospital. Dr. Miller was elected honorary physician to the hospital in 1809, an office which he held for 50 years, resigning in 1860. He died in December, 1871.

The London Hospital.—On May 4th the Lord Mayor gave a dinner at the Mansion House for the purpose of furthering the interests of the London Hospital. In proposing the toast of the evening Sir Marcus Samuel said that 700 patients slept in the hospital every night and if the staff were included there were 1000 souls. The new out-patients' department had cost £70,000, and he was delighted to know that the King and the Queen had consented to open this wing. The new out-patients' department covered an area of 31,000 feet, a space which was formerly occupied by 38 houses producing a rental of £950, which the hospital had to lose to carry out the necessary work. A total of 162,000 patients were treated in a year. The annual expenditure of the hospital was £90,000, and its income was only £22,000. With regard to in-patients the number treated last year was 13,160. The hospital contained 40 wards, and a gift of £1000 would endow a bed and £500 a cot. Both Mr. Sydney Holland and he hoped to collect enough money for the purpose of endowing a ward to commemorate the forthcoming visit of the King and the Queen. During the course of the evening it was announced that the quinquennial appeal had up to the present resulted in a sum of £127,000.

Royal Institution.—The annual meeting of the members of the Royal Institution was held on May 1st, Sir James Crichton Browne, Treasurer and Vice-President, being in the chair. The annual report of the committee of visitors for the year 1902, testifying to the continued prosperity and efficient management of the institution, was read and adopted and the report on the Davy Faraday Research Laboratory of the Royal Institution which accompanied it was also read. Among the officers for the ensuing year may be mentioned:—President, the Duke of Northumberland; treasurer, Sir James Crichton Browne; secretary, Sir William Crookes; managers, Mr. Henry E. Armstrong, Sir Benjamin Baker, Mr. Shelford Bidwell, Sir Alexander Binnie, Sir Frederick Bramwell, Bart., Dr. Donald W. C. Hood, Lord Lister, Sir Felix Semon, Dr. J. Mackenzie Davidson, Mr. Francis Gaskell, and Dr. J. Dundas Grant. Before the conclusion of the proceedings Professor James Dewar said that experiments recently made in the laboratories of the institution revealed important exceptions to the generally accepted view as to the effect of low temperature in producing limitation or cessation of chemical action. It was well known that hydrogen and fluorine were the only two elementary gases which, on being brought into contact with each other, combined at ordinary temperatures in the dark without the aid of an external force such as electricity. Recent experiments showed that these two elements had a powerful mutual affinity, even at the lowest known temperatures, for when fluorine solidified by cooling was placed in contact with liquid hydrogen they combined with violence. A new field of inquiry, which might be called low-temperature chemistry, was thereby opened up.

Death of a Centenarian.—Mr. James Webber died at Barnstaple on April 21st in his 101st year.

Association for the Oral Instruction of the Deaf and Dumb.—The report of the committee of the training college for teachers and school children shows that steady progress has been made during the year 1902. Some of the earlier pupils who are now grown up are successfully fighting the battle of life, while the students trained at the association's training college for teachers are at work not only in all parts of the United Kingdom but in the colonies, both as teachers in schools and in private families, with excellent results. The work of the association is therefore not confined to the comparatively small number of deaf children who attend its practising school, but the teachers trained there confer the benefits of the pure oral system on many hundreds of children outside the sphere of the practising school in every English-speaking country. The practising school was attended during the past year by 47 pupils, 25 boys and 22 girls. The work of the association, however, is somewhat hampered by want of funds and it is to be hoped that there will be a generous response to the committee's appeal for assistance on the occasion of the festival dinner which is to take place on June 11th at the Hotel Cecil.

Presentations to Medical Practitioners.—Mr. William Blackwood, M.B., Ch.B. Edin., has been presented with a pipe and a tobacco jar by the members of the Camborne branch of the St. John Ambulance Association as a mark of appreciation for his services as honorary lecturer.—On April 29th Dr. and Mrs. Dysart McCaw were entertained at dinner in East Finchley, North London, and at a subsequent reception, which was numerously attended, Dr. McCaw was presented by his patients and friends (including his former medical neighbours) with a complimentary address, a purse of gold, and a solid silver tea and coffee service, with a tray on which the following inscription was engraved: "Presented to John Dysart McCaw, Esq., M.D., F.R.C.S., with a silver tea and coffee service, illuminated address, and purse of gold, by his patients and friends when leaving East Finchley, London, N., after fourteen years' residence, as a token of their high esteem and appreciation of his professional services and personal character. 29th April, 1903."—On May 4th the committee of the Tower Hamlets Dispensary, on behalf of the patients of the institution, presented Mr. Oscar E. Lemin, L.S.A. Lond., the retiring resident medical officer, with a framed illuminated address subscribed for by the patients of the institution.

National Hospital for the Paralysed and Epileptic.—The Lord Mayor presided over the festival dinner of the National Hospital for the Paralysed and Epileptic, held at the Hôtel Métropole, London, on April 30th. In speaking to the toast of "Success to the National Hospital for the Paralysed and Epileptic" the Lord Mayor said that fully qualified medical men of all nations resorted to the institution for instruction. An average of 500 medical men attended annually and the accumulated effect of the knowledge disseminated in this manner was enormous. He did not consider that it was fair to compare the cost of that hospital with others, because the care of the patients was one necessitating good diet and rest. Some hospitals discharged their patients before they ought to do so, some kept their patients on an average 18 days, some 28 days, and in comparing statistics of the number of patients passed through any hospital he was not sure that the greatest credit did not rest with those institutions that kept their patients the longest period of time. The Rev. Dr. H. Wace (chairman of the board of management) in responding to the toast referred to the harmonious working of all branches of the administration and drew particular attention to the great advantages derived from the association of the members of the medical staff with the board of management. Sir William Gowers in acknowledging the toast of "The Medical and Surgical Staff" proposed by Sir John A. Cockburn, M.D., said that it was remarkable how visitors from Germany, Holland, and the United States were astounded at the surgical results achieved at the hospital. The medical staff were indebted to the board of management for assistance in the investigation and scientific study of disease for the benefit of the patients. One result of the work was that acute ascending paralysis, which had hitherto baffled the study of pathologists all over the world, had within the last few weeks been discovered by their pathologist, Dr. E. Farquhar Buzzard, to be due to a special form of organism The Rev. Dr. Wace announced that the sum of £1882 had been subscribed towards meeting the year's deficit and raising the necessary money for the erection of new buildings.

Parliamentary Intelligence.

HOUSE OF COMMONS.

THURSDAY, APRIL 30TH.

Calf Lymph.

MR. WEIR asked the President of the Local Government Board if he would state on wh [illegible] iph was supplied or sold by the Local [illegible] practitioners in private practice other [illegible] GRANT LAWSON, who replied, said · Th [illegible] ued by the Local Government Board is [illegible] to public vaccinators for use in vaccinations performed by them in that capacity and no charge is made for it.

The National Vaccine Establishment.

Mr. WEIR asked the President of the Local Government Board, seeing that under the Medical Department of the Local Government Board Vote there were two separate items for contingencies of £800 and £2000, the former item under sub head R, National Vaccine Establishment, and the latter under sub-head S would he state in more detail the nature of this expenditure.—Mr GRANT LAWSON, who replied, said: The two accounts referred to are intended to meet [illegible] iff at the vaccine establishments of [illegible] he cost of keeping additional calves [illegible] expenses which may be rendered [illegible] to prevail and there is in consequence an excessive demand for lymph. It is impracticable to state in detail what sums may be required on these accounts.

Health of Native Mine Labourers.

Mr. J. H. WHITLEY asked the Under Secretary of State for Foreign Affairs if he would take steps to have a record kept of the sickness and mortality which took place amongst the Central African natives during their indenture in the Transvaal mines.—Mr. CHAMBERLAIN answered. He said: I will ask Lord Milner to have such a record kept so far as it may be possible to do so.

Vital Statistics.

Mr. HENRY HOBHOUSE asked the President of the Local Government Board if, in view of the uselessness to county medical officers of health [illegible]

FRIDAY, MAY 1ST.

Ophthalmia and Ringworm.

[illegible] Government [illegible] w children [illegible] ringworm [illegible] the week [illegible] nia in the [illegible] 1 203 in the [illegible] rd for the [illegible] that there [illegible] chools and [illegible] ringworm [illegible] litan work- [illegible] ases, but I am about to obtain a return on the subject.

MONDAY, MAY 4TH.

The Disposal of Sewage.

[illegible] considerable importance and I am not at present in a position to state what course should be adopted in the matter. The subject, however, is receiving my consideration.

Irish Poor-Law Medical Officers.

Mr. SHEEHAN asked the Chief Secretary to the Lord Lieutenant of Ireland whether he would consider the desirability of including within the scope of the references to the Royal Commission about to be appointed to inquire into the amalgamation of unions in Ireland the question of the position of Poor-law medical officers.—Mr. WYNDHAM: This matter was dealt with in my reply to a similar question on March 30th by the hon. Member for North Monaghan.

Glycerinated Calf Lymph.

Mr. WEIR asked the President [illegible]

TUESDAY, MAY 5TH.

Plague Hospital.

Mr. CATHCART WASON asked the Secretary of State for the Colonies if [illegible]

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL AND COX, 8, Henrietta street, Covent-garden, W.C.

The Dental Annual, 1903 (First Year of Publication). Price 7s 6d. net.

BLACKIE AND SON, Limited, 50, Old Bailey, E.C.

Elementary Ophthalmic Optics. By Freeland Fergus, M.D., F.R S E., Surgeon to the Glasgow Eye Infirmary, Examiner in Physics to the Faculty of Physicians and Surgeons of Glasgow. Price 3s 6d. net.

BLANCHARD ET ARCE, 3, Rue Wad Ras, Santander.

N [illegible] culose. Mémoire presénté [illegible] édecine tenu à Madrid en [illegible] Membre Correspondant de [illegible] adrid; Membre Fondateur [illegible] Price not stated.

BROADBENT, ALBERT, Manchester.

The Building of the Body. By Albert Broadbent, F.S.S., F.R.H S., author of "Science in the Daily Meal." Price 2s. 6d. net.

CASSELL AND CO., Limited, London, Paris, New York, and Melbourne

Tropical Diseases. A Manual of the Diseases of Warm Climates. By Patrick Manson, C.M.G., M.D., LL.D. Aberd. New and revised edition. Price 10s 6d. net.

COLLINGRIDGE, W H. & L, *City Press* Office, Aldersgate-street, E C.

The City of London Directory for 1903. (Thirty-third annual Edition). Price 12s. 6d.

DE RUDEVAL, P. R., 4, Rue Antoine Dubois, Paris.

[illegible]

FLEMING H. REVELL, COMPANY, 21, Paternoster square, London.

Physiology, Fear, and Faith. By Lyman Beecher Sperry, A.M., M.D. Price 1s. net.

HEALTH RESORTS BUREAU, 27, Shoe lane, E.C.

Carlsbad and [illegible] Visitors of [illegible] ier Inspector, Laureate of the [illegible] ed from the French by A. C. [illegible]

[illegible] place, Singapore.

Studies from the Institute for Medical Research, Federated Malay States, Vol. II., No. 1. An Inquiry into the Etiology and Pathology of Beri beri By Hamilton Wright, M.D. McGill, Director of the Institute for Medical Research, Federated Malay States. Price 3s.

LANE, JOHN, THE BODLEY HEAD, London and New York.

New Letters and Memorials of Jane Welsh Carlyle. Annotated by Thomas Carlyle and edited by Alexander Carlyle, with an Introduction by Sir James Crichton Browne, M.D., LL.D., F.R.S. In two volumes. Price 25s. net.

LONGMANS, GREEN AND CO., 39, Paternoster-row, E C.

Social Origins. By Andrew Lang, M.A., LL.D. Primal Law. By J. J. Atkinson. Price 10s. 6d. net.

MACMILLAN AND CO., Limited, London.

Life History Album. Tables and Charts for Recording the Development of Body and Mind from Childhood Upwards, with Introductory Remarks. Second edition. Rearranged by Francis Galton, D.C.L., F.R.S. Price 5s. net.

NAUD, C., 3, Rue Racine, Paris.

De la Méthode Ambulatoire dans les Traumatismes Osseux du Membre Inférieur. Par le Dr. Leon Guitard, Ancien Interne du Service. Hôpital Pasteur (Le Havre) Service du Dr. Robert Sorel. Price not stated.

New Sydenham Society (Agent, H. K. Lewis, 136, Gower-street, W.C.).

An Atlas of Illustrations of Clinical Medicine, Surgery, and Pathology. Fasciculus xvi., or v. of New Series. Coxa Vara. Plates A to I. With reprint of Essay by C. R. B. Keetley, Esq., F.R.C.S. Miscellaneous plates J to L. Price to non-members, 10*s.* 6*d.*

Pentland, Young J., Edinburgh and London.

Manual of Practical Anatomy. By D. J. Cunningham, M.D. Edin. et Dubl., D.Sc., LL.D., D.C.L. Oxon., F.R.S., Professor of Anatomy in the University of Edinburgh. Volume first. Upper Limb, Lower Limb, Abdomen. Third edition. Price not stated.

Saunders, W. B., and Company, London, Philadelphia and New York.

Saunders' Year-book of Medicine and Surgery. 1903. Under the general editorial charge of George M. Gould, M.D. Price 13*s.* net per volume.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to The Lancet *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

Ahern, Richard, M.B., Ch.B. R.U.I., has been appointed Resident Medical Officer, Tooting Home Infirmary, Wandsworth and Clapham Union.

Allen, W. T. D., M.B., B.Ch., B.A.O. R.U.I., has been appointed Honorary Assistant Surgeon to St. George's Hospital for Diseases of the Skin, Liverpool.

Barclay, W. Bowie, L R.C.P., L.R.C.S. Edin., has been appointed Medical Officer at Aldershot.

Barrie, William Turnbull, M.B., M.S. Edin., has been appointed Certifying Surgeon under the Factory Act for the Hawick district of the county of Roxburgh.

Biddle, H. G., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer of Health for Broadstairs.

Blair, Alex., M.B., M.S. Glasg., has been appointed Medical Officer of Health to the Ashington Urban District Council.

Bond, Francis T., M.B. Lond., M.R.C.S., F.R.S. Edin., has been re-appointed Medical Officer of Health for the Chippenham Urban District.

Chamberlain, Katherine, M.B., B.S. Lond., has been appointed House Physician to the Royal Free Hospital.

Erhardt, Conrad Charles James, M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Crosshills district of the county of Yorks.

Grattan, M. H., L.K.Q.C.P.I., has been appointed Certifying Surgeon under the Factory Act for the Ongar district of the county of Essex.

Grimwade, A. Sheppard, M.R.C.S., L.R.C.P., has been appointed Health Officer for the District of Caulfield, Victoria, Australia, and Assistant Anæsthetist to the Melbourne Hospital.

Gordon, A. Knyvett, M.B., B.C., B.A. Cantab., has been appointed Lecturer on Infectious Diseases at Owens College (Victoria University).

Jupe, F. I. M., L.S.A. Lond., has been appointed Certifying Surgeon under the Factory Act for the Histon district of the county of Cambridge.

Lower, N. Y., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Presteign district of the county of Radnor.

Murray, W., M.B., M.S. Edin., has been appointed Certifying Surgeon under the Factory Act for the Hessle district of the county of York.

Sutter, R. R., M.D. Aberd., has been appointed Certifying Surgeon under the Factory Act for the Warboys district of the county of Hunts.

Whitehouse, A. Landon, M.R.C.S., L.R.C.P. Lond., L.D.S. Eng., has been appointed Dental Surgeon to the Westminster General Dispensary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Aberdeen Royal Infirmary.—Medical Superintendent. Salary £300 per annum, without residence.

Barra, Parish of.—Medical Officer and Public Vaccinator. Salary £119.

Birmingham Corporation.—Medical Officer of Health. Salary £1000 per annum.

Brecon and Radnor Asylum, Talgarth, R.S.O. Assistant Medical Officer, unmarried. Salary £140 per annum, with apartments, board, attendance, and laundry.

Cancer Hospital, Fulham, S.W.—House Surgeon for six months, renewable. Salary £70 per annum, with board and residence.

Cheshire County Asylum, Parkside, Macclesfield.—Junior Assistant Medical Officer, unmarried. Salary £140, rising to £160 per annum, with board, apartments, washing, and attendance.

East Suffolk and Ipswich Hospital.—Second House Surgeon, single. Salary £80 per annum, with board, lodging, and washing.

Evelina Hospital for Sick Children, Southwark Bridge-road, S.E.—Anæsthetist. Honorarium £25 per annum.

Hastings, St. Leonards, and East Sussex Hospital.—House Surgeon, unmarried. Salary £75 per annum, with residence, board, and washing.

Hulme Dispensary, Dale-street, Stretford-road, Manchester.—House Surgeon. Salary £150 per annum, with apartments, attendance, coal, and gas.

Liverpool Eye and Ear Infirmary.—House Surgeon. Salary £80, with residence and maintenance.

London County Council Epileptic Colony, Ewell, Surrey.—Assistant Medical Officer. Salary £200 per annum, with board, furnished apartments, and washing.

London Hospital, Whitechapel, E.—Assistant Obstetric Physician.

Manchester Royal Infirmary.—Resident Surgical Officer, unmarried. Salary £150 per annum, with board and residence.

Manchester Southern and Maternity Hospital—Resident House Surgeon. Salary £100 per annum and board.

Metropolitan Hospital, Kingsland-road, N.E.—Dental Surgeon.

Middlesex Hospital, W.—Director of Cancer Research Laboratories. Salary £500, rising to £800 per annum. Also Research Scholarship, value £105 per annum.

National Dental Hospital and College.—Anæsthetist on Tuesdays.

Newcastle-upon-Tyne Dispensary.—Visiting Medical Assistant. Salary £160, for first year and £180 afterwards.

Newport and Monmouthshire Hospital.—Assistant House Surgeon. Salary £50 per annum, with board, residence, and washing.

North Devon Infirmary, Barnstaple, Devon.—House Surgeon. Salary £80 per annum, with board, residence, and washing.

North-Eastern Hospital for Children, Hackney-road, Bethnal-Green, E.—House Physician, House Surgeon, and Resident Casualty Officer for six months. Salary in each case at rate of £80 per annum, with board, residence, and washing.

North-West London Hospital, Kentish Town-road.—Resident Medical Officer, also Assistant Resident Medical Officer, for six months. Salary at rate of £50 per annum in each case, with board, residence, and washing.

Royal College of Surgeons of England.—Hunterian Professors, Erasmus Wilson Lecturer, and Arris and Gale Lecturer for the ensuing year.

Royal Southern Hospital, Liverpool.—Junior House Surgeon. Salary 60 guineas per annum.

Royal Westminster Ophthalmic Hospital, King William-street, West Strand, W.C.—House Surgeon for six months. Honorarium £25. Also Clinical Assistants for six months.

St. Mary's Hospital, Quay-street, Manchester.—Medical Officer for six months, renewable. Salary £65 per annum, with board and residence.

Sheffield Royal Hospital.—Junior Assistant House Surgeon, unmarried. Salary £50 per annum, with board, washing, and apartments.

Southport Infirmary.—Resident Junior House and Visiting Surgeon, unmarried, for six months, renewable. Salary at rate of £70 per annum, with residence, board, and washing.

Teignmouth Hospital, S. Devon.—House Surgeon. Salary £70 a year, with board, lodging, and washing.

University of Glasgow.—Additional Examiner for Degrees in Arts, Science, and Medicine, with special reference to Zoology. Salary £50 per annum, with travelling and hotel expenses.

West Bromwich District Hospital.—Resident Junior House Surgeon. Salary £50 per annum, with board, lodging, washing, and attendance.

Westminster General Dispensary.—Resident Medical Officer. Salary at rate of £120 per annum, with rooms, gas, coal, and attendance.

West Riding Asylum, Wadsley, near Sheffield.—Fifth Assistant Medical Officer. Salary £140, rising to £160, with board, &c.

The Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Burton, Westmorland; Tamworth, Stafford; Dunfanaghy, Donegal; Strathdon, Aberdeen; Wootton Bassett, Wilts; Haslingden, Lancaster; and at Stanford-le-Hope, Essex.

Births, Marriages, and Deaths.

BIRTHS.

Corbin.—On May 2nd, at Beckenham, Kent, the wife of E. R. St. Clair Corbin, M.B. Lond., M.R.C.S., of a son.

Croft.—On April 30th, at Fenton, Staffs., the wife of J. T. H. Croft, M.R.C.S., L.R.C.P. Lond., of a daughter.

MARRIAGES.

Hubert—Williams.—On Tuesday, April 21st, at St. Martin's Church, [illegible] G. H. Torrance, assisted by the Rev. E. A. [illegible] e parish, William Arthur Hubert, M.R.C.S. [illegible] Sussex, to Gertrude Louisa, only daughter [illegible] of Rose Hill, Dorking.

Storrs—Simon.—On April 30th, at St. Peter's, Eaton-square, William Townsend Storrs, M.R.C.S., L.R.C.P. Lond., to Maude Blanche, only daughter of Mr. and Mrs. Alfred Simon.

DEATHS.

Bullock.—On April 30th, at Eastgate, Warwick, Thomas William Bullock, M.R.C.S., L.S.A., aged 65 years.

Gray.—On April 27th, at Adelaide-place, Newcastle, Co. Down, George Gray, M.D. R.U.I., J.P.

Noble.—On May 4th, at 29, Wellington-square, Oxford, Eric Raymond Noble, Balliol College, Oxford, younger son of Samuel Clarke Noble, M.R.C.S., L.S.A., of Kendal, aged 23.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

POST MORTEM EXAMINATIONS APART FROM A CORONER'S INQUEST.

AT a recent meeting of the Ealing town council a question was raised which included some important points. The facts were as follows:—A working man in the council's employ died in the Ealing cottage hospital. The cause of death having been duly certified the body was removed to the home of the deceased, a cottage, there to await burial. On the following day some of the medical staff of the hospital, including the practitioner who had attended the deceased, called at the house and asked the permission of the widow to make a post mortem examination. This consent being obtained an examination was made, but only of a very slight character, for the body was not taken out of the coffin. At the meeting of the council Mr. Councillor George Taylor asked the council as the sanitary authority, whether in future it would take care that when post mortem examinations were made upon bodies of patients dying in the hospital such examinations should be made in the hospital mortuary. Mr. Councillor Taylor contended [illegible] rs to make a post mortem examinatio[illegible] yor, however, said that it was a mat[illegible] the council's cognisance and the clerk said that the *council had no* power to prevent post mortem examinations being made in a private house. The case in question is unimportant in itself and there would, we suppose, have been no difficulty in the post mortem examination having been made in the hospital post mortem room as *the patient had died in the hospital.* There was no question at any time of an inquest and the post mortem examination was asked for simply for the sake of confirmatory information. Such cases often happen, but the point arises, has any ratepayer a right to the use of the parish mortuary? Suppose a person dies in a private house. The medical man *in attendance, although cognisant* of the cause of death, wishes some further information and asks the surviving relatives if they object to a post mortem examination being held. They say that they have no objection, only that they do not wish the examination to be performed in the house. Has the medical man as a ratepayer or have the relatives as representatives of a deceased ratepayer the right to the public mortuary? If so, whose duty is it to remove the body from the house to the mortuary—the undertaker employed by the family of the deceased or the parish authorities? Can the public mortuary be used by any ratepayer without a fee, and if not what fee should be charged?

In endeavouring to answer these questions it must be remembered that post mortem examinations are not held in mortuaries, which are places for the reception of dead bodies before interment. Local authorities may provide and maintain places (which must not be at a workhouse or mortuary) for the reception of dead bodies during the time required to conduct any post mortem examination ordered by a coroner or other constituted authority, and in London the County Council can require the provision of such places. The private use of such places, either as a matter of right or otherwise does not seem to be contemplated by the Acts giving power to provide them, and it is therefore doubtful whether the authorities which have the duty of making regulations for their management could properly permit any such use to be made of them. It is, however, conceivable that such use might be permitted in special circumstances if application were made.

A REPUDIATION.

To the Editors of THE LANCET.

SIRS,—I have been informed that a slip was distributed last week at [illegible] ate from [illegible] owledge [illegible]

Harley-street, W., May 4th, 1903. R. LAKE.

To the Editors of THE LANCET.

SIRS,—In justice to Mr. Richard Lake of 19, Harley-street, I wish to state that it was not with his knowledge or consent that I published a copy of the certificate which he issued as to Miss Ada Reeve's indisposition last week. I am, Sirs, yours faithfully,

Lyric Theatre, May 5th, 1903. TOM B. DAVIS.

ANOTHER REPUDIATION.

To the Editors of THE LANCET.

SIRS,—I have just received a surgical catalogue from Messrs. Salt and Sons of this town and in it I find my name printed in large letters in connexion with an instrument. My name has been inserted without my knowledge and I have requested Messrs. Salt to suppress it.

I am, Sirs, yours faithfully,
C. W. SUCKLING, M.D. Lond.,
Consulting Physician to the Queen's Hospital.
Birmingham, April 30th, 1903.

THE DIAGNOSIS OF SMALL-POX.

To the Editors of THE LANCET.

SIRS,—Many years ago, when I had more opportunities of seeing small-pox patients, I observed that discrete and atypical cases presented an arrangement of the vesicles which although not mentioned in the ordinary text books, may possess some diagnostic value. In any given case it may be noticed that several of the vesicles are disposed in pairs, a large vesicle with a smaller one immediately adjacent, also, [illegible] e seen three vesicles, [illegible] placed close to each [illegible] ing a part of but being distinct from the general eruption. In the few cases of discrete small-pox that I have seen since I found this arrangement of some of the vesicles, so that it appears to be sufficiently constant in mild cases of variola to be of some value in assisting diagnosis.

I am, Sirs, yours faithfully,
May 4th, 1903. S. BINGHAM.

GOVERNMENT ETYMOLOGY.

IN a recent notice of a handy form of stationery called "Letterettes" while we praised the invention we felt bound to comment unfavourably upon its name. Messrs. John Walker and Co., Limited, the proprietors of Letterettes, have since written: "We sympathise with you in your objection to the name. But although we are 'proprietors of manufactured goods' we are also publishers of one or two not unimportant educational books, and we can assure you that our 'respect for etymology' is by no means as scant as you appear to imagine. We have it, however, on the authority of the Government that 'Letterette' is '*an English word in common use,*' so that you will see that if we have sinned we are by no means alone in this respect. We must confess that we could find no other word that so exactly described the article in such an easy manner." It appears that Messrs. John Walker and Co. applied to Government to register their invention under the name of Letterettes and were then told that this could not be done because the word Letterette was an English one in common use.

THE NOTTINGHAM CHILDREN'S HOSPITAL.

IN THE LANCET *of March 7th (p. 699) we published an article on the* dispute which has arisen at the Nottingham Children's Hospital. In that article the action of the lady superintendent was adversely commented on. She was charged *inter alia* with failing to report the case of a sick nurse to the house surgeon and with dismissing a *locum tenent lady dispenser. Having heard the statement of the* lady superintendent on this matter we are satisfied that we unintentionally did her an injustice and that she acted in accordance with the rules of the hospital.

MOTOR CARS FOR MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—Messrs. Hewetsons have asked me to give results of my experience with their four and a half horse-power Benz which I bought early in June, 1902. This I am pleased to do, as perhaps I was a little too severe in the letters which I sent to THE LANCET in 1900 and 1902 concerning my worries with their three horse-power car. I purchased my present one as already stated, in June, 1902, and received it with metal wheels which Messrs. Hewetsons very kindly lent me until September when I received the artillery wheels which I had ordered. I had the car fitted at Hewetsons' coach builders with a hood, glass extension and side flaps, so that in wet weather I was absolutely covered and protected. I have used the car constantly since I have had it for about five hours a day. In addition during term my daughter has gone in it to school at Blackheath, a distance of some two and a half miles. I have also had three holidays in the car, one through Oxford, Cheltenham, Worcester, Hereford, Abergavenny, Cardiff, Chepstow, and Gloucester, and (with my wife and child) over Birdlip, through Winchester, Swindon, Marlborough, Salisbury, and *viâ* Winchester and Guildford home. The only casualties were that last year a bolt drew through the frame and so caused the chain to be thrown, and about a month ago the rear axle broke. In both instances, though in the latter case the period of guarantee had passed, Messrs. Hewetsons replaced the parts free of charge. The only other trouble was that the spindle inlet valve broke which cost 12*s.* 6*d.* to replace, and that the spindle of the friction wheel that drives the pump had to be bushed and new leathers fitted and I expect shortly to have to get new tyres on the driving wheels and perhaps new chains. In conclusion, I can only say that I am very pleased with my car and with the way in which it has behaved.

I am, Sirs, yours faithfully,
CHARLES T. W. HIRSCH, M.R.C.S. Eng.,
L.R.C.P. Lond., L.S.A.,
Public Vaccinator and Police Surgeon, Woolwich; late
Medical Officer for Rewa, Colonial Medical
Woolwich, April 20th, 1903. Service, Fiji.

"GELINEAU DRAGES."

To the Editors of THE LANCET.

SIRS,—Could any of your readers give me their experiences of "Gelineau drages" in epilepsy. Information will oblige.

Yours faithfully,
Putney, S.W., April 29th, 1903. J. [illegible]

A POINT OF ETIQUETTE.

To the Editors of THE LANCET.

SIRS,—The following is a case on which I would like to have your opinion. A certain Mrs. O has been long in the habit of visiting an aged aunt. On Saturday she noticed a change in her condition and she asked the nearest medical man, Dr. X, to see her. He was ill in bed and the messenger was informed to get someone else. Mrs. O asks her own medical adviser, Dr. Y, to see her and he promises to call next day, as he lives six and a half miles distant. Meantime the old lady is apparently worse and another practitioner, Dr. Z, is called in. He lives in the same village as Dr. X and he went immediately and prescribed. Next Sunday morning Dr. Y calls, also Dr. Z, but at different times. However, Dr. Y assures Mrs. O that the case is safe in Dr. Z's hands and he will look after the patient. On Monday morning Dr. X turns up and he asks Mrs. O to tell Dr. Z not to come back as the patient is his. It is a good many years since Dr. X was in the house. Mrs. O, in her anxiety to preserve peace, asks Dr. Z not to come back and he quietly and without demur consents to do so. Dr. Y has not again had an opportunity of calling, though it is the strong desire of the family that he should do so.

I will feel very much obliged if you will express your views on this case, the conduct of Dr. X towards his brother practitioner being totally incomprehensible to, Yours faithfully,

May 1st, 1903. NE PLUS ULTRA.

⁂ *As Dr. X was summoned in an emergency and was unable to* attend the case when so summoned it does not appear to us that he has much *locus standi.* At any rate, the patient or the patient's friends can decide, in the circumstances detailed, which medical man should remain in attendance upon the case.—ED. L.

UNSEEMLY ADVERTISEMENT.

To the Editors of THE LANCET.

SIRS,—I was passing through Dunmanway some days ago and saw the following advertisement on the front of a house:—

MEDICAL HALL.

PURE DRUGS AND CHEMICALS.

PRESCRIPTIONS ACCURATELY COMPOUNDED.

HORSE AND CATTLE MEDICINE.

—— —— M.D., Surgeon.

The advertisement appeared in *very* large letters.

I am, Sirs, yours faithfully,

May 4th, 1903. NEMO.

UNPRECEDENTED.

To the Editors of THE LANCET.

SIRS,—May I record a remarkable event that has recently occurred in my practice? A child near my house playing in the street fell upon some broken glass and cut herself. The usual crowd of strangers accompanied the patient to a doctor (i.e., to me) and I dressed the wound. Then one of the strangers *volunteered to pay me a fee—and did so!* I have been in practice for 15 years but such an event has never happened to me before. I feel that I ought to publish it.

I am, Sirs, yours faithfully,

May 4th, 1903. E. A. L.

ANTIKAMNIA.

To the Editors of THE LANCET.

SIRS,—In the advertisement pages of THE LANCET of May 2nd is one from the Antikamnia Chemical Company. They say that this drug "positively will not depress the heart." I have very grave doubts on this point and in fact in two cases, one being myself, I will assert that it did positively depress the heart. My own experience is as follows. I had been suffering from toothache and had taken three five-grain doses of antikamnia with the interval of 20 minutes between each dose. At the end of that time not feeling much better I had risen from a sofa to seek further aid when I was overtaken with giddiness and fell back in a fainting condition, my face covered with sweat and the pulse feeble and irregular. I recovered after a dose of brandy-and-soda. The second patient was a young lady to whom I had given two five-grain tabloids together for the lumbar pain of influenza. I was sent for about 20 minutes later and found her with an irregular pulse and heart sounds almost inaudible. She improved after an injection of ether and hot bottles to her feet.—I am, Sirs, yours faithfully,

E. H. WORTH, M.R.C.S. Eng.

Mitcham-lane, Streatham, S.W., May 2nd, 1903.

◆

K. D.—(*a*) The employment of unqualified assistants is prohibited by the General *Medical Council and technically the gentleman* mentioned is unqualified. The possession of a foreign medical degree might be held by the General Medical Council to save his principal from the accusation of "covering" but our correspondent is advised not to run the risk. (*b*) We are not prepared to guess what view the General Medical Council might take of the conduct of a medical man who employed a dispenser to canvass for votes for an appointment. We doubt if a professional offence can be proved whatever may be thought of the taste of the proceeding. The General Medical Council has declared its disapproval of medical aid societies where canvassing is employed because the medical officers of such societies are placed in the position of advertising themselves to the lay public; but this is a totally different position.

Scot.—The regulations which govern practice in America by holders of British qualifications vary in each particular state or territory. In some states examinations are held, while in others indorsement by the Board of Health is sufficient. The fees vary from $10 to $25. If our correspondent will tell us the state or territory in which he wishes to practise we will endeavour to help him further.

X. Y. Z.—(*a*) We know of no text-book on the subject. (*b*) In the absence of any precedent in the matter we consider that a candidate's papers in an examination, after they have been looked over by the examiners, belong to the body appointing the examination. Possibly a lawyer might see another side to what is a purely legal question.

Practice in Canada.—As a rule, medical men holding British diplomas and degrees can practise in Canada on obtaining a licence from the Provincial Medical Boards. They must, however, be registered and the fees vary from £2 to £20, according to the province selected.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.) London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat Golden-square (9.30 A.M.), Soho-square (2 P.M.).

WEDNESDAY (13th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M).

THURSDAY (14th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's [illegible] Charing Cross (3 P.M.), St. George's [illegible] ry's (2 P.M.), Ophthalmic (10 A. [illegible] Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (16th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (11th).—MEDICAL SOCIETY OF LONDON (11, Chandos street, Cavendish-square, W.).—8 P.M. General Meeting. Election of Officers and Council.—8.30 P.M. Ordinary Meeting. Papers:—Mr. Bruce Clarke: Some Points in the Pathology and Treatment of Enlarged Prostate.—Dr. H. R. Andrews and Dr. R. O. B. Wall: Chorea in Pregnancy.

TUESDAY (12th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Paper:—Dr. L. Rogers: *The* Differentiation of the Continued and Remittent Fevers *of the* Tropics by the Blood Changes (illustrated by epidiascope).

WEDNESDAY (13th)—DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square W)—5 15 P.M Demonstration of Cases of Interest

SOUTH WEST LONDON MEDICAL SOCIETY (Bolingbroke Hospital Wandsworth Common)—8 45 P M Paper—Dr G F McCleary The Feeding of Infants

THURSDAY (14th)—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover square, W)—8 P M Specimens will be shown—Adjourned discussion on Mr Bowreman Jessett's paper Some Rare Complica [illegible] Jones [illegible] ctomy [illegible] hrough [illegible] Result

FRIDAY (15th)—EPIDEMIOLOGICAL SOCIETY (11 Chandos street, Cavendish-square, W)—8 30 P M Mr Jonathan Hutchinson The Etiology of Leprosy

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN (11 Chandos street, Cavendish square W)—5 P M Clinical Cases by Mr F F [illegible] H [illegible] H [illegible] the [illegible] sion [illegible] e of [illegible] o of Splenic Leukæmia in a *A Case of Colloid Cancer of*

LECTURES, ADDRESSES, DEMONSTRATIONS &c

MONDAY (11th)—MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22 Chenies street W C)—4 P M Dr T Colcott Fox: Clinique (Skin) 5 15 P M Dr G E Herman Retroversion of the Gravid Uterus

POST GRADUATE COLLEGE (West London Hospital Hammersmith road W)—5 P M Dr Moullin Pelvic Hæmorrhage

TUESDAY [illegible] (22, [illegible] (Med [illegible] and [illegible]

POST GRADUATE COLLEGE (West London Hospital Hammersmith road W)—5 P M Dr Beddard The Physiology and Pathology of the Ductless Glands

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen square Bloomsbury)—3 30 P M Dr J Taylor Epilepsy and its Treatment

WEDNESDAY (13th)—MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22 Chenies-street W C)—4 P M Mr A H Tubby Clinique (Surgical) 5 15 P M Dr Leonard Williams: Some Practical Points in Climatology

POST GRADUATE COLLEGE (West London Hospital Hammersmith road W)—5 P M Dr R H Cole Melancholia

THURSDAY (14th)—MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22, Chenies street W C)—4 P M Mr Hutchinson Clinique (Surgical) 5 15 P M Dr G H Drummond Robinson Uterine Displacements

POST GRADUATE COLLEGE (West London Hospital Hammersmith road W)—5 P M Mr Baldwin Treatment of some Injuries and Emergencies

CHARING CROSS HOSPITAL—4 P M Mr Stanley Boyd: Surgical Cases (Post Graduate Course)

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (7 Fitzroy square W)—4 P M Prof Clifford Allbutt Introductory Address on the Causes of Tuberculosis (Post Graduate Course)

THE HOSPITAL FOR SICK CHILDREN (Gt Ormond street W C)—4 P M Dr Bau [illegible]

GUY'S HOSPITAL [illegible] logical Theatre [illegible] Secretions in relation to Disease (Gordon Lecture)

FRIDAY (15th)—MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22 Chenies street W C)—2 30 P M Discussion on Leprosy 5 5 P M Sir Felix Semon: Acute Septic Inflammations of the Throat and Neck

POST GRADUATE COLLEGE (West London Hospital Hammersmith road, W)—5 P M Dr Recce Public Health Regulations as regards Shipping

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication

We cannot prescribe or recommend practitioners

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub Editor"

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We cannot undertake to return MSS not used

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METEOROLOGICAL READINGS

(Taken daily at 8.30 a m by Steward's Instruments)

THE LANCET Office, May 7th, 1903

Date		Barometer reduced to Sea Level and 32° F	Direction of Wind	Rain-fall	Solar Radia in Vacuo	Maximum Temp. Shade.	Min. Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 a.m
May	1	29 40	S E	0 32	82	55	49	50	52	Cloudy
„	2	29 64	S W	0 08	93	60	47	50	53	Cloudy
„	3	29 47	S E	0 12	64	[illegible]	47	53	51	Raining
„	4	29 21	S	0 51	106	[illegible]	49	51	52	Raining
„	5	29 22	S	[illegible]	91	60	60	53	[illegible]	Cloudy
„	6	29 46	S W	0 19	101	63	50	52	[illegible]	Cloudy
„	7	29 60	S W	0 11	88	54	50	51	54	Cloudy

Communications, Letters, &c., have been received from—

A.—Mr. G. H. Appleyard, Rotherham; Messrs. Arnold and Sons, Lond.

B.—Messrs. A. A. Baker and Co., Lond.; Dr. Henry J. Bigelow; Dr. James Burnet, Edinburgh; Dr. A. P. Beddard, Lond.; Mr. S. E. Baxter, Wollaston; Dr. Walter Broadbent, Brighton; Mr. A. E. Barker, Lond.; Dr. J. Cunningham Bowie, Cardiff; Mr. S. Bingham, Baguley; Mr. J. W. Benson, Lond.; Mrs. K. Behnke, Lond.; Messrs. Bates, Hendy and Co., Lond.

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D.—Messrs. J. L. Daube and Co., Frankfurt; Dr. A. C. Dutt, Hull; Denver [illegible] Co., Lo[illegible] Heat C[illegible] Walton-on-the-Naze; Dr. R. A. Dove, Southsea.

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Letters, each with enclosure, are also acknowledged from—

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F.—F. J. A.; F. S. B.; F. W. B.

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J.—J. P. L; J. T. C.; J. M.; J. E.; J. L. F.; J. L. T.; J. G.; J. F.; J. J. H.

K.—*Kentish Express*, Ashford; Mr. Kirwan, Oranmore; Kunstverlag "Monachia," Munich.

L.—London Association of Nurses, Secretary of; Mr. D. C. Lamb, Hadleigh.

M.—Dr. J. F. Macara, Durness; Dr. A. Marriott, Aldeburgh; Manchester Corporation, Clerk of; Mr. W. E. Miles, Lond.; Messrs. Mahalanobis and Co., Calcutta; M., Ryde; Dr. A. J. H. Montague, Worksop; Messrs. McKesson and Robbins, New York; M. J.; "M. B.," Clifton; Dr. T. K Monro, Glasgow.

N.—N. M. A.

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A Clinical Lecture

ON

COMBINED CONGENITAL DEFECTS AND ORGANIC DISEASE OF THE HEART.

Delivered in the Royal Infirmary, Newcastle-upon-Tyne,

BY THOMAS OLIVER, LL.D., M.D. GLASG., F.R.C.P. LOND.,

PHYSICIAN TO THE ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE.

GENTLEMEN,—In Quain's Anatomy, 1892, vol. ii., part 2, p. 386, Professor G. D. Thane, after alluding to the fact that the natural aortic arch of man and of all mammalia is a left one, produced by the persistence and development of the left fourth arch, says: "Reference may here be made to the complete lateral transposition which is occasionally seen in the aortic arch and pulmonary arteries as well as in the great veins and several divisions of the heart and which may affect only those parts (dextrocardia) or may be accompanied by a similar transposition of the viscera of the body generally (situs inversus). Such cases are usually unattended by any disturbance of function or other unnatural conditions of structure. There is, in fact, only a change of position which may be compared to that in which the natural parts would appear if viewed by reflection from a mirror. From the direction of the apex beat towards the right and other *deviations from the normal position the existence of this* transposition is capable of being ascertained during life."

In December, 1898, the subject of the following notes first came under my care. He was then a youth aged 18 years, slightly under the average in height, but was otherwise well developed, healthy-looking, and rather florid. Until three years previously he had been a healthy lad and had taken his part in the ordinary games of boyhood without inconvenience or fatigue. At this period he had rheumatic fever which confined him to bed for three weeks. He made a good recovery but had never felt so well since He had been conscious of shortness of breath at times and had suffered from palpitation. The pulse was 80, water-hammer in character, and collapsed readily under the finger. The apex of the heart was seen and felt beating between the fifth and sixth ribs on the right side of the body fully one inch below the right nipple. Here the impulse was well marked and was equal in force to that felt in ordinary circumstances in the usual apex are [illegible] dilated. [illegible] Over the [illegible] generally [illegible] murmurs. These murmurs were carried downwards and to the right for about two inches, as well as a short distance down the [illegible] apex area [illegible] nounced [illegible] and healthy all over There was no sign of pleural effusion *or of pneumothorax*, nor a history of previous lung trouble that was capable of explaining the cardiac displacement. Both sides of the chest were symmetrical and measured equally 15½ inches. Below the sixth rib on the right side there was a comparatively limited area of dulness, while on the left side dulness began at a similar level and was carried downwards to the lower border of the left costal arch and round to the back. From the size of this area of dulness on the left side it was suggestive of a transposed liver. Between these two areas of dulness was one that gave a tympanitic note when percussed. The abdomen was otherwise normal. The urine contained urates but was free from albumin and sugar. He was ordered a mixture of digitalis, ammonia, and spirit of chloroform, and pills of mercury with colocynth occasionally. When I saw him three weeks afterwards he had wonderfully improved so far as his symptoms were concerned, and on Feb. 20th, 1899, the patient was still keeping well. The pulse was 80 and water-hammer in character. *On June 12th, 1899*, the pulse was 82 and of a water-hammer type. There were systolic and diastolic murmurs over the base of the heart. The diastolic murmur, while ceasing at the third left costal cartilage, was carried down to the cardiac impulse just internal to the right nipple. There was no murmur heard over the back of the chest at the inferior angle of either scapula.

At varying intervals of from four to six months I have had the opportunity of examining this youth and of recording facts. It is sufficient to say that there have been a gradual increase in the size of the heart and a development of a systolic murmur over the apex area, suggesting hypertrophy of the left ventricle and mitral regurgitation. In the autumn of 1900 the cardiac impulse was seen and felt two inches below the right nipple and in a line with it, but beyond the first sound at the apex having been replaced by a murmur the cardiac bruits remain the same. With the development of the mitral murmur the heart symptoms became less urgent. By July, 1901, he had so improved in health and lost his *cardiac symptoms that he was indulging in cycling and mild* tennis-playing. His pulse was 84 and of a water-hammer type. There were systolic and diastolic murmurs at the base of the heart conducted down the sternum while at the apex area there was a well-marked systolic murmur. There was very slight epigastric pulsation. When re-examined in April, 1902, the condition of the heart was unaltered, his general state of health was good, and he was remaining free from cardiac symptoms My diagnosis is aortic and mitral regurgitation occurring in a displaced heart (dextrocardia) [illegible] to be very [illegible] Practice of [illegible] congenital [illegible] direction of the heart is changed so that the apex points to the right instead of the left, sometimes the position is vertical. These displacements are frequently found associated with general transposition of the viscera. In this general transposition the heart lies upon the right side (dextrocardia). The fundus of the stomach lies upon the right side with the spleen, while the pylorus and duodenum lie upon the left. The rest of the intestine is likewise changed. The cæcum lies upon the left, the sigmoid flexure and rectum lie upon the right. The ascending and descending colon change names. The liver lies in the left hypochondrium and the right and left lobes change places. The gall-bladder, the gall-ducts, the ligaments and fissures show corresponding dislocation. The right kidney lies higher than the left and the [illegible] the right. *Malformations of* [illegible] in typical situs inversus. ... [illegible] viscera is explained by an abnormal habitus with reference to the umbilical vesicle in the embryo. Dareste showed that when a hen's egg is warmed on one side a transposition of the viscera more or less pronounced occurs in the majority of cases. The inversion takes place whenever the embryo does not turn at the right time from the right to the left. The condition is not now so rare as was formerly believed, since the advance of methods of examination discloses the transposition during life. Hitherto the alteration was discovered only upon the post-mortem table. ..... The total transposition of the viscera in no way interferes with long life and perfect action of all the organs. Symptoms, when present, are due to complications or accidental associated malformations."

The diagnosis of inversion of the heart is easy enough, since it is sufficient to feel the apex beating in the right instead of in the left side of the chest. Percussion confirms the situation of the organ. In every case it must be demonstrated that the heart has not been displaced to the right by pleuritic effusion occupying the left chest; also that there has not been disease of the right lung followed by adhesion and retraction Constantin Paul had the opportunity of observing two cases at the St. Antoine Hospital and to these I will briefly allude. Case 1.—The patient was a woman, aged 35 years, who showed an arrest of development on the left side of the body. In her the apex beat of the heart was felt in the fifth right intercostal space 10 centimetres (four inches) from the middle line of the sternum. The heart showed slight left-sided hypertrophy. There was neither souffle nor irregularity of rhythm. The liver was not displaced. There was atrophy of the left chest and the left breast was smaller than the right, a remark that also applied to the left forearm Case 2.—The patient was a lad, aged 15 years, *incompletely* developed, whose heart was beating in the right side of the chest in the fifth intercostal space seven centimetres (two and three-quarter inches) from the mid-line. On auscultation the heart was normal. The liver on the left side of the body was of normal size. The spleen on the right side seemed to be small. The patient was mainly left-handed. Constantin Paul saw this patient 16 years afterwards; he had grown very little. The heart had developed to some extent; its apex beat was further removed to the right, being eight and a half centimetres (three and a half inches) from the middle line of the sternum.

From these cases it will at once be seen that inversion of the heart may or may not be accompanied by inversion of the other viscera. In Paul's second case the inversion appears to have been pretty complete, since it involved other organs. Inversion of the viscera does not necessarily produce any serious trouble, for persons who are the subjects of it may be ignorant of the fact. Still, it is only proper that the transposition should not pass unperceived by the medical attendant. There are some congenital defects of the heart that are incompatible with life—e.g., where there is ectopia cordis—i.e., where the heart lies outside the body—a defect that belongs rather to teratology than to medicine.

Professor A. Birmingham published in the *Journal of Anatomy and Physiology*, vol. xxvii., 1893, p. 139, the details of a case of dextrocardia with congenital abnormalities in a young woman, aged 20 years, who was of rather short stature and who during life had been very cyanosed. In listening to her chest Dr. Joseph F. O'Carroll, the medical attendant, heard a loud harsh systolic murmur from the second right intercostal space downwards to below the right nipple and into the right axilla. On opening the chest after death not only was the apex of the heart found to be directed to the right but the whole organ was twisted on its long axis, the aorta was seen to rise from the right ventricle in the situation of the pulmonary artery, while the pulmonary artery arose from the same ventricle, its orifice being placed midway between the base and apex among the columnæ carneæ; its lumen was only a quarter of an inch. The inter-ventricular septum was perforated so that the freest communication possible existed between the two cavities. The inter-auricular septum was also incomplete.

In the *Journal of Anatomy and Physiology*, vol. xxvi., 1892, p 117, Professor T. Wardrop Griffith describes the anatomical peculiarities observed in a child six months old, in whom there were detected during life dextrocardia with very marked cyanosis and transposition of the viscera and in whom after death the two auricles were found communicating with a ventricle that was divided by an incomplete septum; the inferior vena cava was absent, its place being taken by a vessel formed by the junction of four hepatic veins.

I have abstracted these cases from medical literature in order to emphasise the remark that there may be in dextrocardia some congenital defect in addition to right-sided displacement of the heart. In all circumstances, as already mentioned, it is necessary to eliminate, where the heart is found beating in the right chest, such causes as left-sided pleural effusion, right-sided pulmonary excavation with retraction of lung and pericardial adhesion, also left-sided pneumo-thorax. In my case of dextrocardia recorded above there is no evidence of there having been any chest affection capable of causing displacement of the heart; besides, a skiagram that was taken shows, both from the shape of the organ and from the direction of the apex, that the dextrocardia is congenital The other point—one that is more difficult to answer—is whether the displaced heart was congenitally perfect and free from disease and has simply become affected as a consequence of rheumatic fever through an endocardial lesion leading to aortic regurgitation, or whether the systolic and diastolic murmurs that are heard indicate defective septa and abnormality of the valves. In favour of the view that there is aortic regurgitation and that it is the consequence of endocarditis we have (1) the previous good health of the patient until a particular illness; (2) the history of rheumatic fever, an illness which experience shows is one of the most frequent causes of incompetent aortic valves, especially in young subjects; (3) the absence of cyanosis at birth and all through life—although cyanosis, I admit, is not necessarily present when there are defective septa; (4) the water-hammer character of the pulse and its typical aortic type, as shown in some sphygmograms that were taken; (5) exaggeration of the cardiac murmurs and the development under observation of a mitral regurgitant murmur; (6) the fact that there are no loud harsh murmurs heard all over the chest as occurs in most cases of congenital heart defect; and (7) that although *diastolic* murmurs may be heard in congenital heart disease yet they are extremely rare. I have given my reasons for not regarding the case as one of defective septa nor do I think that there is a patent ductus arteriosus. In such a condition a thrill is felt over the second left intercostal cartilage and a very prolonged systolic murmur is heard, rather a late or post-systolic murmur in fact, followed by an accentuated second sound at the base of the heart, and attended by well-marked dyspnœa on exertion and by cyanosis.

With the second case, that of a man who died recently, many of you are familiar, having seen the patient with me in the wards upstairs. He was a ship's carpenter, aged 37 years, and was admitted under my care on April 1st, 1902, complaining of shortness of breath, cough, and swelling of the legs of two years' duration. Beyond the fact of his mother having died from apoplexy there was nothing in the family history that calls for comment. The patient had indulged freely in alcohol. There was no history of syphilis or of rheumatic fever. About six years before, when working in a shipyard on the Clyde, he fell a distance of 25 feet and injured the front of his chest. He was taken to the Western Infirmary, Glasgow, where he lay for about two months under the care of Professor (now Sir) William T. Gairdner. No ribs were broken as a consequence of the accident nor was there any spitting of blood. Until two years previously, except for the accident alluded to, he was a healthy man. At this date he began to suffer from shortness of breath and swelling of the feet. He also had cough and morning sickness and was consequently unable to follow his employment. Owing to difficulty of breathing the patient had had of late to be propped up in bed. His face was pale, his cheeks were slightly bluish, and his lips were cyanosed. The pulse was 66, feeble and irregular; the legs were œdematous. There was also œdema of the arms and hands; the hands were cold and cyanosed. There was venous pulsation in the neck. The urine was high-coloured, scanty, with a specific gravity of 1025, and contained a trace of albumin. The chest was barrel-shaped with wide intercostal angle and its wall was slightly œdematous. The heart's impulse was diffuse and wavy. Epigastric pulsation was well marked; pulsation was also observed in the third, fourth, and fifth interspaces to the left of the sternum. The apex beat was felt in the sixth interspace two inches external to the left nipple. A well-marked and prolonged thrill could be felt there which was entirely systolic; it was long and quivering. The area of cardiac dulness was increased transversely. At the apex there was heard a loud murmur occupying the whole of the systole, too coarse and rough to be called musical, rather sharp in its incidence, yet never preceding the systole, and while well conducted towards the left axilla it was also very distinct internal to the apex beat. This loud systolic murmur was heard over the whole of the left chest posteriorly and all down the spine as far as the sacrum. At times the second sound was reduplicated at the apex. Over the aortic area there was a systolic murmur which was conducted into the vessels of the neck. A well-marked systolic murmur was heard over the tricuspid area and as the left base of the heart was approached from this area there could be heard a diastolic murmur which at times was not very audible owing to the second sound being distinctly accentuated. It was difficult to assign to this diastolic murmur an origin that was satisfactory. It did not seem to come quite within the category of an aortic murmur nor was it apparently one of those diastolic murmurs that are occasionally met with in mitral stenosis. Its source, therefore, must be left an open question. In the lungs numerous bronchial râles were heard and there was dulness over the base of each lung. The abdomen was distended, being resonant in front and dull in the flanks; fluctuation was readily obtained. The liver was enlarged and tender. Splenic dulness was not perceptibly increased.

Under treatment the patient temporarily improved. The cardiac murmurs, however, remained unaltered and beyond the fact that later there was a disappearance of the second sound at the apex there was no new development that calls for notice during the four weeks that he was under my care. On the last day of April, at a time when the dropsy of the extremities was disappearing, the patient unfortunately grazed his leg on the bedstead. A day or two after this the skin of the leg became red and acutely inflamed like erysipelas. He had a rigor and the temperature rose to 101·4° F. A few days prior to the accident his general condition was, on the whole, satisfactory. The patient, as already stated, seemed to be improving. Under the administration of digitalis, to which subsequently diuretin was added, the quantity of urine rose from 22 ounces on April 22nd to 136 ounces on May 1st and concurrently with this the dropsy was fast disappearing. In addition to the rapid diminution of the œdema the albumin disappeared from the urine, a circumstance that suggested a cardiac origin for the albuminuria. It was at this stage that the second cardiac sound ceased to be audible at the apex and that notwithstanding the large quantities of urine passed the breath sounds were still very deficient over the base of each lung. The patient died suddenly on the evening of May 2nd. Dr. James Muirhead had been speaking to him and had just left him when his head was observed to fall back and he was found to be dead.

At the post-mortem examination both pleural cavities were found to contain a large quantity of serum. The lungs were congested and œdematous. The heart was enlarged. The left ventricle was hypertrophied but the enlargement affected particularly the right side of the heart. The aortic valve was competent; that of the pulmonary artery was incompetent. On opening the left ventricle its wall was observed to be of more than usual thickness and its cavity was slightly dilated. The mitral orifice was incompetent. The valves were thickened at the tips, along their margins, and at the bases; the *chordæ tendineæ* were thickened. The aorta was small, being about half the size of the pulmonary artery. Its valve was composed of only two segments. The interior of the aorta was healthy and the coronary arteries were normal. Stretching across the interior of the left ventricle just underneath the aortic orifice was a misplaced chorda tendinea. The pulmonary artery was widely dilated; its valve segments were normal in number but they were thickened along their free border; so, too, were the corpora *Arantii.* The valve was incompetent and the thickening of its segments was such as would also probably cause slight obstruction to the circulation. The right ventricle was large and dilated. There was a large patent foramen ovale in the inter-auricular septum which was imperfectly closed by a flap. The liver was enlarged and nutmeg-like. The spleen presented nothing abnormal. The kidneys were congested (heart kidneys) and firm, their capsule stripping off readily.

As the patient had been under the care of Professor Gairdner in the Western Infirmary, Glasgow, a few years previously I wrote to Sir William Gairdner and asked him if he could remember the patient or throw any light upon the case. I have received through Dr. R. Barclay Ness, one of the assistant physicians to that institution, the clinical notes bearing upon the case. I have Sir William Gairdner's permission to reproduce these. The notes exhibit, as might be expected, the usual carefulness and completeness which old Glasgow students remember as characteristic of the methods of their esteemed teacher. When I came to compare the two sets of notes there were a few discrepancies as regards dates and origin of the illness that are naturally to be expected from a patient whose illness has lasted a few years and these can at once be set aside although some of them may be incidentally mentioned so as to bring the details of Sir William Gairdner's clinical examination into line with my own.

A man, aged 32, shipwright, admitted into the Western Infirmary Oct. 28th, 1897, complaining of breathlessness and swelling of feet. Note by Professor Gairdner, Oct. 29th, 1897.—Admitted with a very evident cardiac lesion. Apex [illegible]
three-quarters of an inch o [illegible]
defined at this point and for [illegible]
is not quite easy to define [illegible]

it lose the blowing character and al[illegible]
which at times approaches a music[illegible]
reach what would be called a disti[illegible]
[illegible] the first sound, no part of it preceding
[illegible]lf, coincidently with the impulse, is
[illegible]not emphatic and is to a considerable
[illegible]
remarks), has distinctly the chara[illegible]
the same time it is very loudly [illegible]
right of the apparent apex and [illegible]
but not so much change as defi[illegible]
of murmur. This murmur, th[illegible]
in intensity towards and still m[illegible]
and it also loses notably as the sternum is *approached, so much* so that on the whole it appears to Dr. G. that the suspicion of
tricuspid need scarcely [illegible]
crease in the emphasis [illegible]
sternum. ...... The mur[illegible]
tensively to the back [illegible]
[illegible]
certainly might be capable of escaping observation and might be [illegible]

Sir William Gairdner's notes were taken four and a half years ago and allowing for such pathological changes as are bound to occur in a diseased heart during this period there is, on the whole, pretty general agreement between the clinical data then and recently. Sir William Gairdner, like myself, regarded the loud systolic murmur as pointing to mitral regurgitation. He, too, was struck by its wide propagation and also by the fact that there was a basic diastolic murmur which was not localised and was extremely apt to escape detection. The heart had during these four and a half years undergone some change: it had become still further enlarged, its apex beat was more displaced to the left than previously and in the meantime there had developed a tricuspid murmur. At the necropsy the heart presented combined congenital defects and organic lesions—e.g., (1) a patent foramen ovale and aortic bicuspid valve, and (2) a mitral regurgitation and thickened valve segments, also widely dilated pulmonary artery with thickened valves which closed imperfectly.

With a heart showing such a number of lesions as that of the patient in the above case it is difficult to say definitely to which of them the loud prolonged systolic murmur is to be attributed. Bruits in the cardio-vascular system are mainly due to vibration, owing to currents of blood being forced with rapidity through a constricted orifice into a wider channel beyond and causing shock, or it may be that the impact of this moving liquid throws the more tranquil mass into a series of eddies. I am therefore disposed to think that in consequence of the hypertrophied wall of the left ventricle, the thickened mitral curtains, and the narrow aorta, rendered narrower by the pressure upon it of the dilated pulmonary artery, the loud systolic murmur was generated within the left ventricle. The patent foramen ovale was incapable of causing it. The dilated pulmonary artery probably did not of itself cause a systolic murmur, although its thickened valves may possibly have contributed to the development of such a murmur. Beyond alluding to the bicuspid valve of the aorta this circumstance calls for no comment other than that where bicuspid semilunar valves are met with in the pulmonary artery or aorta the malformation is usually due to two of the segments of the valve coalescing so as to form one large segment. Such valves are said to exhibit a great tendency to undergo sclerotic change and to result in regurgitation. Neither of these events occurred in the aorta of the patient alluded to. The only published case bearing any resemblance to the above that I have been able to lay my hands upon is one reported by Lawrence Humphry in Allbutt's "System of Medicine," vol. v., p. 707—viz., a patient under the care of Dr. Greenfield in whom the heart was enlarged, especially the right ventricle, the two auricles communicated freely, the septum between the ventricles was complete, the left ventricle was hypertrophied and dilated, and the aortic valve consisted of two cusps, while the orifice itself was narrowed.

Congenital abnormalities of the heart raise many important questions to which answers cannot always be returned. Two circumstances stand out prominently in ante-natal pathology: one is that malformations of development can be produced experimentally in the embryo chick by shaking the egg, varnishing its surface, or by injecting toxins within the shell; and the other is that when the mammalian embryo is interfered with during the very early days of development the result is an abnormality, but if the experiment is made later and nearer term it is much more likely to result in disease; in other words, when a maternal malady occurs shortly after the commencement of pregnancy it is apt to cause a malformation of the fœtus, if later intrauterine disease. It depends upon the stage of development the embryo has reached and the manner in which impressions are made upon it as to whether the result is an incomplete inter-ventricular or inter-auricular septum or whether the evolution of the large arterial trunks that rise from the aortic bulb is interfered with. The septum between the ventricles grows up as early as the fourth week.

It used to be taught that the placenta is a barrier to the passage of poisons from the mother to the fœtus. Porak showed that this did not apply to some of the metallic poisons and in my own experiments of feeding pregnant animals with white lead not only did the fœtuses die in utero, but in their liver was found lead on chemical analysis. It is thus, too, with poisons of a more subtle nature. The distinguished French obstetrician Mauriceau was born with the marks of small-pox upon his body and mothers are known to have transmitted the virus to their children in utero without they themselves exhibiting the disease. Maternal rheumatic fever may be followed by fœtal endocarditis. To ante-natal endocarditis must be attributed some congenital defects of valves, such, for example, as when they are found glued together in infants who have died shortly after birth. As it is the right side of the heart that has the greater amount of work to do in the fœtus, judging from its thicker walls, so it is therein we look for, and where we usually find, evidence of the consequences of ante-natal endocarditis.

Some congenital defects are more serious than others. It is impossible for the fœtus to live outside the uterus with some of them. Free communication between the auricles or between the ventricles is not necessarily attended by danger to life, for the circulation is still capable of being carried on and considerable length of years may be reached without any symptoms at all. Cyanosis even may not be present. It is with congenital abnormality of the heart as with diseased hearts—the balance of the circulation has to be broken before symptoms arise. In morbus cæruleus in addition to cyanosis and clubbing of the fingers epistaxis is frequent. Gibson of Edinburgh has shown that the blood itself is altered; its specific gravity is often as high as 1070, its hæmoglobin may reach 160 per cent., and the number of red corpuscles may rise to 9,000,000 per cubic millimetre, nearly double the ordinary number met with in health. Children thus affected bear cold badly. They cannot get sufficient oxygen into their blood and consequently their body temperature is low. Not only are they cold-blooded, they are apathetic and lethargic and are with difficulty educated. Where a patent foramen ovale persists there may be no symptoms and no physical signs, but should the inter-ventricular septum be defective the circulation is apt to be impeded, for blood is thrown with considerable force into the right ventricle and distends this chamber and as a consequence there is often dyspnœa on exertion. The pathology of cyanosis is not yet quite clear. It is maintained that in congenital heart disease cyanosis is due to an intermixture of the two kinds of blood, arterial and venous, or to extensive venous congestion, and yet sometimes very imperfectly closed inter-ventricular septa are found on post-mortem examination without there having been cyanosis during life except in particular circumstances. It is a question of aeration. There is a difficulty of getting oxygen into the blood. This liquid exhibits its original fœtal characters of retaining in its hæmoglobin excess of carbonic acid. The cyanosis, it seems to me, depends rather upon the physical and chemical constitution of the blood itself than upon defective circulation or upon admixture of arterial and venous currents, for although hæmoglobin is hæmoglobin under all circumstances yet in congenital cyanosis it never becomes the typical oxy-hæmoglobin that gives the bright red hue to actual blood. As the cyanosis is most marked in those cases of congenital heart disease where obstruction to the circulation existed long before birth it would seem as if the defect in the development of the cardiac apparatus had made itself felt upon other specially related portions of the mesoblast whereby the blood corpuscles at their inception have characters impressed upon them different to the normal.

Usually there is little or no difficulty in the diagnosis of congenital heart disease. Cyanosis at birth, and persisting, accompanied by clubbing of the finger ends and a tendency to epistaxis, suggests malformation of the heart. The difficulty consists rather in diagnosing the particular kind of malformation. The area of cardiac dulness is usually enlarged. On auscultation there is frequently heard a loud prolonged systolic murmur over not only the whole of the præcordial area but the back of the chest and pretty well over the whole of the trunk. There may be a thrill, systolic in time, felt over the upper part of the area of cardiac dulness. The second sound at the base is oftener accentuated than not. Very rarely a diastolic murmur is heard at the base. These remarks apply to stenosis of the pulmonary artery and imperfect inter-ventricular septum, to incomplete inter-auricular septum attended by complications, and to patent ductus arteriosus. Where the ductus arteriosus remains pervious the rumbling systolic murmur is located mostly at the second and third left intercostal cartilages.

A good deal depends upon the nature and the extent of the malformation as to how long life will be maintained. If the defect in the heart is great the infant will probably die shortly after birth, but a patent foramen ovale or a slight incompleteness of the inter-ventricular septum is quite consistent with the attainment of great age. Several of my own patients reached the age of 40 years and presented no symptoms and had no discomfort until an intercurrent malady, like bronchitis or some pulmonary malady, developed, which disturbed the balance of the circulation. In some instances individuals who were the subjects of congenital malformation of the heart have reached the age of 70 years. Tuberculous disease of the lung is met with, particularly when there is stenosis of the pulmonary artery.

Treatment can only be conducted on general lines. Warm clothing must be worn, all violent exercise and undue exertion should be avoided, the diet should be carefully attended to, and complications should be treated as they arise.

A Lecture

ON

THE USES OF PARAFFIN IN PLASTIC SURGERY.

Delivered at the Medical Graduates' College and Polyclinic on April 3rd, 1903,

BY STEPHEN PAGET, F.R.C.S. ENG.,
SURGEON TO THE WEST LONDON HOSPITAL AND TO THE THROAT AND EAR DEPARTMENT OF THE MIDDLESEX HOSPITAL.

GENTLEMEN,—It is now four years since Gersuny of Vienna invented the injection of paraffin for the cure of certain deformities and diseases. The whole subject cannot be got into one lecture; but I ask your leave to-day to say something first about the history of this method; next, about its practice; and finally, about its results.

HISTORY.

The whole credit of the discovery of this method must be given to Gersuny and to him alone. It is true that Delanger of Tournai, also in 1899, did experiment on himself, putting a little paraffin under a scar on his arm; but the man who worked out the thing and made it known to our profession was Gersuny and nobody else. He had been making experiments, from a therapeutic point of view, to see what was the effect of the injection of paraffin under the skin of animals; and he had found that the paraffin, once set, remained as a hard nodule, giving no pain and undergoing no apparent change. In May, 1899, he was consulted by a young man who wished to serve in the army but could not hope to pass his medical examination because both his testicles had been removed for tuberculous disease. Gersuny, by the injection of paraffin into each half of the scrotum, produced the appearance of the testicles and the young man had no difficulty in passing his examination. Gersuny's second case was that of a girl who had undergone an operation for cleft palate. The operation had been successful, but the palate was not long enough to touch the back of the pharynx and she could not sound hard *g* or *k*. He made some slight improvement of her speech by the injection of paraffin into the palate, so that it was thickened and brought nearer to the posterior pharyngeal wall. His third case was of the same kind, his fourth case was a sunken cicatrix, and his fifth case was a sunken nose. He published these five cases, with a long list of suggestions for other uses of paraffin; some of them were [illegible] to nothing, but among them was [illegible]ght be possible to cure incontinence [illegible] of urine in the female, by raising hard nodules of paraffin under the mucous membrane of the rectum or of the bladder. And in 1900 he published his first case of this kind—a vesico-vaginal fistula which he narrowed and made water-tight with paraffin, after seven operations had been done to close it and had all of them failed. Then came a disaster, a case of pulmonary embolism. Pfannenstiel, on Nov. 23rd, 1900, injected 30 cubic centimetres of paraffin into a prolapse of the bladder with vesico-vaginal fistula. It does not appear that the patient was anæsthetised, but, what is still more strange, when he had injected this very large quantity of hot paraffin all at one time into the loose vascular tissues round the bladder, he let the patient get up and go home. No wonder that she was attacked by pulmonary embolism on her way to the railway station. She recovered and then they found that the injection had failed to close the fistula. This unhappy case brought the treatment into discredit for a time. But in February, 1901, Kapsammer published three cases of incontinence of urine in the female, from various causes, all of them successfully treated, and in June, Moskowicz, Gersuny's assistant at Vienna, published more than 30 cases treated by Gersuny and himself without any disaster and with a very good amount of success. Observe how wide was the range of these cases. Clefts and fistulæ were narrowed, cavities here and there were filled up, prolapses and herniæ were kept back, small-pox marks were taken out, sunken noses were remodelled, the falling in of the cheek after removal of the upper jaw was repaired, and a nerve divided for the relief of neuralgia was prevented from growing together again. This paper by Moskowicz is a wonderful instance of surgical zeal, almost of surgical extravagance, and in one or two of the cases there was more valour than discretion in the use of the paraffin. All the same, there is a long record of good and successful work, and it left not much more to be said.

That is the history of the introduction of Gersuny's discovery; and in this country the method is associated with the names of Walsham, Scanes Spicer, Ball, and Lake in London, Walker Downie in Glasgow, and Cathcart in Edinburgh. As for me, I published two cases last September in the *British Medical Journal* and to my amazement they were copied into the *Daily Mail* as a wonderful new discovery, and from the *Daily Mail* into all sorts of papers, including *Tit-Bits* and the *Woman's World*. The immediate result was that a great many cases of sunken nose came to me for treatment with paraffin; and I have already operated on 43 cases of sunken nose and three prolapses. But the whole invention of the method and its introduction into practice are Gersuny's work, and I ask you again to observe what a wide field of surgery he set himself to cover. If we could create fibrous tissue in the living body we should find a thousand uses for it and the use of paraffin is to build up in any accessible part of the body a structure that shall act like hard fibrous tissue. We may admit that the method has been carried too far in this or that case, but there remains a vast number of cases in which it has succeeded, though the usual operations of surgery had all failed or had been impracticable. It has been especially valuable in certain cases of fistula, in cases of prolapse, and in cases of sunken nose; and it is, for some of these tedious and miserable cases, a very happy discovery.

PRACTICE.

So much for the history of this method. Now for the practice of it and the rules that are to be observed in the making of these injections. Let me say, once and for all, that it is not so easy as it sounds, and that nobody ought to begin remodelling noses and bolstering up prolapses till he has thoroughly rehearsed the whole performance and has learned all the tricks of the materials that he is working with. Again and again something goes wrong just at the last moment: a syringe leaks or cracks, or the paraffin sets in the needle, or escapes above the piston, or oozes out again at the point where the needle went in, or fails to do what it ought. Let us take the whole subject in order: first the paraffin, next the syringe, and next the method of making the injection.

The paraffin, of course, must be sterilised by boiling before it is put in bottles. Everybody is agreed about that, but then comes the question, Which is the best of the paraffins that are now in use? Is it Gersuny's which melts at 104° F., or Pfannenstiel's which melts at 115°, or Eckstein's [illegible] too hot, and it has no special advantages. Gersuny's paraffin is easy to use; but I doubt whether it sets quite so quickly and so hard as it ought, and I doubt whether it would stay unchanged through a prolonged fever or a constant exposure to tropical sunshine. Moreover, there is some evidence, from experiments on animals, that it is safer to use a pure paraffin, not a mixture of paraffin with vaselin. So far as I can understand all these arguments about the different kinds of paraffin, I think that we had better use a paraffin that cannot be softened by any possible rise of the body-temperature and is not likely to burn the tissues. That is to say, it ought to have a melting-point somewhere between 108° and 115°. A point or two, this way or that, is no great matter. But where the paraffin has got to stand heavy and immediate pressure, as in the modelling of a sunken nose, there, I think, the higher melting-point is preferable. Where the strain and the pressure are less, as in the bolstering up of prolapsed mucous membrane, the lower melting-point will suffice.

Next, we must bear in mind that all paraffin shrinks when it sets. For example, the paraffin that is used for imbedding specimens, to cut sections, is always cupped and shrunk; and the same thing happens with paraffin injected under the skin or under the mucous membrane. Of course, the hardest paraffins shrink the most; but they all shrink more or less, except those that are too soft to be of general use. This natural shrinkage is inevitable; happily it comes to very little and in many cases cannot be detected.

Next, let us consider the syringe. Do we require a special syringe or can we manage with an ordinary antitoxin syringe? For the injection of paraffin into the loose submucous tissue of a prolapse an ordinary antitoxin syringe works well; but it does not work well, at least in my hands, for the remodelling of noses. In cases of prolapse there is no great pressure on the paraffin; but in nose cases there is a good deal of pressure. In cases of prolapse no harm is done by a slight excess of paraffin or by a slight inequality in the distribution of it; but in nose cases you have to be more accurate. Therefore the wiser plan is to have a special syringe. The right sort of syringe for these injections can be worked easily with one hand; it cannot inject an excess of paraffin with a jerk; it retains heat well; it does not leak; and it can be sterilised by boiling. To insure these advantages it is made with two rests for the fingers; it has a screw-nut running on its piston-rod; it is jacketed with a bit of drainage-tube; its needle is screwed on to it, not merely plugged on or attached by a bayonet-catch; there is a little leather washer (leather, not rubber) between the needle and the syringe; and the several parts of the syringe are screwed or welded together, not merely stuck together with cement. A strong, straight steel needle, one or one and a half inches long, is employed, such as is used for exploring the pleura, shortened and fitted with a screw-cap for attachment to the syringe. A very good syringe is sold by Mr. Rogers of 327, Oxford-street, W.; he also keeps the sterilised paraffins.

The method of injection is much the same whether a sunken nose is to be remodelled or a sinus is to have its walls brought into apposition or a prolapse is to be held up. You melt the paraffin by putting it in water that is well above its melting-point but not hot enough to crack the bottle. You sterilise your needles and cleanse your syringes and test them carefully. I say syringes because it is well to have two in case of accidents. Then you put your melted paraffin and your syringes in a water bath at a temperature five or six degrees above the melting-point of the paraffin. An ordinary steriliser makes a good water bath and you must secure your bottle of paraffin with a loop of wire or some such contrivance to keep it from toppling over. Everything being ready you draw up four or five cubic centimetres of paraffin; then you hold the syringe under water while you adjust the screw-nut and press out a drop or two of paraffin to make sure that it is all right; then you dip your needle for six or eight seconds into water that is boiling or just off the boil; and then you make the injection. But of course it is one thing to be working at a sunken nose and another thing to be working at a prolapsed bowel. Let me speak first of nose cases and then of cases of prolapse. Practically my experience is limited to these two kinds of cases.

1. *The remodelling of noses.*—I have now done 43 of these cases. There have been no death, no embolism, no sloughing of the skin, and no wandering of paraffin into the eyelids, and the results are permanent and they are good. In some cases the improvement is really excellent, in some it is fairly good, and in some I have failed to do much good. In a very few I am sorry that I ever meddled with the case. In more than one case a good result ought to have been obtained but was not for want of more skill and better judgment. Some cases that seemed hopeless have done very well and some that looked very easy were found to be insuperably hard. Sometimes I have been pleased and the patient has been disappointed; at other times I have been disappointed but the patient has been pleased. It is anxious work and heavy responsibility altering the shape of people's noses and the more I see of these cases the more certain I am that you cannot manufacture perfect Greek noses out of nothing and that the surgeon must be content if he succeeds in making a nose that shall be merely unnoticeable. But do not think that it is a small matter to accomplish this much. You can enable a man to get work and to get a girl to marry him and to go through life without the incessant staring and chaffing that made him always unhappy and self-conscious. Remember especially that the man in the street takes it for granted that a sunken nose is proof positive of syphilis. I will not take up your time by repeating the miserable stories that some of these patients have told me—how they are out of work and badgered and ridiculed everywhere because they are so ugly. And it is even harder for the women. Of course, in some of these nose cases one may find something to laugh at; all the same it is a tragedy and the comic element, after all, is a part of the tragedy. So one has to take these cases seriously and in the treatment of them it is wisest not to promise too much but to say that you will do your best to improve them so far that they shall be able to go through life unnoticed and free from contempt and chaff.

Now let me say something first about the different kinds of sunken nose and then about the method of injecting the paraffin in these cases. I will not describe the causes of sunken nose. Doubtless the chief causes are injury, inherited syphilis, and acquired syphilis, but there remains a set of cases where the history is of this sort, that the patient had an abscess in the nose when he was a child and then the bridge of the nose fell in or never grew up. These cases are not, I think, syphilitic and they seem to show that the nasal bones in early life may be attacked by that acute inflammation which we call in the long bones acute osteomyelitis, or acute epiphysitis. There is also another set of cases where you get no history at all. The patient was "born like it"; he "never had a bridge to his nose"; he may have injured it, but every child knocks his nose some time or other. Anyhow, there are no history of acute destructive inflammation and no evidence of syphilis, only the nose has always been flat ever since the patient was a baby. These cases seem to point to a real arrest of development either from some slight injury or from some transmitted influence of which we know nothing.

There are two principal forms of sunken nose. In one there is no bridge to the nose, the nasal bones are flat, and the whole nose is ape-like—what the Germans call a "saddle nose"; in the other the bridge of the nose is intact but the soft tissues between the bridge and the tip are sunken as though a bite had been taken out of the nose just below the bridge. Let us call the first form the bridgeless nose and the second form the indented nose. And I wish here to say that I have lately seen two cases of this indented nose, in one of which the deformity seems to have followed the ordinary operation for adenoids; in the other it followed the application of perchloride of iron to the inside of the nose to stop bleeding after an operation on the inferior turbinates. I only tell you what I was told and I cannot understand how the removal of adenoids could cause indentation of the nose; but in the second case it seems certain that the perchloride of iron had burned a hole through the septum nasi and had brought about a very ugly sinking-in of the lower part of the nose. This case where the septum was perforated leads me to speak of perforations of the septum in their relation to the use of paraffin. A small perforation, or even a perforation as big as a sixpence, makes no difference to the success of the injection. Of course, there are cases of old syphilitic necrosis with a large hole in the hard palate and all the inside of the nose wrecked and destroyed and the nose all shrunken and crumpled up where you cannot get a good result. I will speak of these cases in a minute or two, but the point which I wish to make here is that a simple perforation of the septum, even a large one, does not in any way interfere with the remodelling of the outside of the nose. So long as you can get your needle between the mucous membrane inside and the skin outside you may improve the looks of the patient. Only the skin must be loose, not cicatricial. That is the one thing more important than everything else. What is the condition of the skin? It matters little whether you are dealing with a bridgeless nose or with an indented nose; and sometimes the cases that look the worst do the best. It all depends on the state of the skin. If it is fairly loose and soft and healthy, if you can pick it up between your finger and your thumb, then you can be sure of doing good. Try raising the skin between your fingers, drawing it forward into position, and you will see in a moment whether your injection will be successful, for if you can raise the skin then the paraffin can raise the skin and keep it raised. But if the skin is tight and hide-bound and rigidly contracted, as it is in elderly people whose noses have been sunken for nearly half a century, or, still worse, if it is cicatricial and immoveably fastened by adhesions to the deeper tissues, then you will never make that patient good-looking and you are in danger of failure and great disappointment.

The most favourable of all cases are those in which there are an abundance of loose healthy skin and a fair length of face between the forehead and the mouth and a well-shaped and refined tip to the nose. The most unfavourable cases are those where the nose is shrunken, shrivelled, and cicatricial and, as it were, crumpled up by old syphilitic necrosis. Between these two extremes there are all sorts of cases: some where the nasal arch is splayed out on either side of the face, making an unsightly ridge under each eye; some where the nose is not only sunken but also crooked; some where the tip of the nose is wide and clumsy and out of proportion to the rest of the face; and some where the face is so short and square that there is not much room to work in. You may find it necessary to straighten the nose or to do some plastic operation before you make use of the paraffin, or you may have to inject the paraffin not once but twice or even three times. And you must not expect that you can work miracles. It is better to do too little than to do too much; it is better to set yourselves to make not perfect noses but unnoticeable noses. Be content if you can raise a decent-looking bridge or if you can *almost* obliterate an ugly indentation below the bridge.

I come now to the method of injecting the paraffin in these nose cases. Prepare everything very carefully and even then expect that something will go wrong at the last moment. In most cases I insert the needle low down, just above the tip of the nose, in or near the middle line, and inject upwards; for I feel sure that I cannot then wound the transverse nasal vein, nor can the paraffin run into the tip of the nose. It is a good plan to prick the skin first with a fine surgical needle set in a holder; this enables you to introduce the paraffin-needle gently and accurately. It is also a good plan just before you make the injection to dip your needle for six or eight seconds into water that is boiling or just off the boil as this prevents the paraffin from setting in the needle. The injection must be made rather rapidly, say, at the rate of one cubic centimetre every 8 or 10 seconds, so that you may get all your paraffin soft at the same time and may mould it altogether. How much paraffin does it take to raise a sunken nose? I have said elsewhere from 8 to 10 cubic centimetres. This is too much. I do not deny that some noses, even with this quantity, still remain somewhat sunken. The paraffin will not all run in and some of it is wasted and that which does run in does not produce the desired effect. These are the unfavourable cases where the skin is shrunken, hide-bound, or cicatricial, but in a favourable case where the skin is loose and healthy you may raise it satisfactorily with two or three cubic centimetres. While you inject the paraffin your assistant presses his fingers and thumbs hard and tight over the forehead, the eyebrows, the inner angles of the orbits, and the sides of the nose, keeping out the paraffin by hard pressure from these forbidden regions. You make the injection, you wait a few seconds to let the puncture become sealed, you withdraw the syringe and put it back in the water bath, then you take the nose and mould it vigorously while your assistant lets cold water trickle over it. Do not be too gentle over the moulding; squeeze and work the nose this way and that, and do not leave off for a good 10 or 15 minutes, till everything feels absolutely rigid. Then lay a mask of cold wet lint over the face and change it frequently. A few days later, if you want to add a little more paraffin, you can do it under cocaine only, but do not attempt it unless the skin be fairly loose or you will do more harm than good. If by mischance a small quantity of paraffin has run astray and has set where it ought not, and remains as a little nodule under the skin you can dissect it out like a little sebaceous cyst. I had to do this in one of my cases and it was easily done; but it would not be so easy if this mischance were to happen in the eyelid. In one of my cases, and in one only, a small abscess formed nearly a fortnight after the treatment; it looked very bad at the time but the final result is very good. In three cases the line of puncture of the needle broke down, but this is not a serious disaster. In all my 43 cases I have had no serious disaster, no sloughing or embolism, or any terrible thing to record. Only I have failed in a large number of cases to make the nose handsome and in a very few I have done no good at all. No two cases are alike. In one or two I gained something by freeing adherent points of skin with a sort of tenotomy needle; in one I gained something by inserting the paraffin needle into the nostril and making the injection from within outward. But there are cases where you cannot accomplish a good result, do what you will. You cannot raise the skin of the nose unless the skin is there to be raised and is loose enough to rise.

2. *The holding up of prolapses.*—Give me a few minutes more in which to speak of this use of paraffin. I have had only three cases, but the results were so good that the method certainly deserves consideration. My patients were all over 60 years old; one had prolapse of the bowel after excision of the rectum for cancer, one had prolapse of the bowel of 22 years' duration, and one had suffered for 28 years from prolapse of the uterus. I need not say what an amount of misery these three old people represent. And, to my amazement, they have all of them been cured. It is too soon to be sure that they will not need another injection later; but, for the present, there they are, wholly free from what had seemed incurable troubles. The paraffin, in these cases, must be injected immediately under the mucous membrane of the prolapse, so as to raise and to thicken and to stiffen it and to narrow the passage through which the prolapse comes down. With a prolapse of the bowel I think it is a good plan to take a fold of the prolapse between one's finger and thumb, and to endeavour to make two or three well-defined round masses or hummocks of paraffin which shall form a sort of valve or partial stricture just inside the anus. In a bad case you may have to inject the paraffin at diverse levels and for some distance above the anus. Of course, you do not dilate the anal opening; it is over-dilated already. Indeed, in one of my cases I combined with the injection of paraffin Mayo Robson's incision and deep suture to narrow the anal ring. Having injected the paraffin to the best of your judgment, so as to thicken and to stiffen and partly to occlude the lower two inches of the bowel, and, as it were, to produce the feel of a hard smooth growth involving half or two-thirds of its circumference and reducing its calibre, you put in a morphia suppository and keep the bowel up with a pad of wool and a T-bandage and treat the case as [illegible] operation. Of [illegible] of the anus may [illegible] say, three-quarters of an ounce or a whole ounce—and, in addition to the injection, Mayo Robson's incision. And, of course, you keep your paraffin away from the bladder and ureters and put it mostly under the posterior and lateral folds of [illegible] I think that one ought not to [illegible] atient can be made quite comfortable and content with a pessary, for there is, I suppose, a very slight risk of embolism. Perhaps this risk of wounding a vein could be met by a preliminary puncture with an ordinary needle at the point where the paraffin needle is to be inserted. The general procedure in prolapse of the uterus is much the same as in prolapse of the bowel, only, of course, it may need a larger quantity of paraffin; in my one case I used nearly two ounces. The injections should be kept away from the bladder and urethra, and during the injection into the posterior vaginal wall a finger should be kept up the rectum in order that it may not be wounded. The bulk of the paraffin should be put under the mucous membrane of the posterior vaginal wall and of the posterior part of the vaginal cervix and at the sides of the vagina. If there be an old rupture of the perineum it may need to be repaired. The success of my case astonished me, for I succeeded in making the vagina so narrow and so strong that the uterus remained high up and fixed, even during hard straining, and this in a woman over 70 years of age in whom the prolapse occurred if she only sneezed or turned over in bed. Of course, this method must not be used for women who may yet conceive and the vagina must not be so narrowed as to impede coition.

RESULTS.

The results in the only kinds of cases of which I have had experience are certainly good. I confess that in a very small proportion of the nose cases they have not been favourable, but in all save these they have been good and many of them have been very good. The prolapse cases are few but they have given excellent results. Doubtless in this or that case of sunken nose it would have been better instead of injection or before injection to do one of the plastic operations that Mr. W. J. Walsham has lately described in THE LANCET,[1] but on the whole the use of these injections has answered thoroughly well; only, to raise a sunken nose you must, above all else, have skin that is loose enough to rise. As for cases of prolapse it seems difficult to overestimate the good that can be done by this method, only it is not so easy as it sounds.

ABDOMINAL HYSTERECTOMY FOR MYOMA BY DOYEN'S PROCEDURES.

BY WALTER G. SPENCER, M.B., M.S. LOND.,
F.R.C.S. ENG.,
SURGEON TO THE WESTMINSTER HOSPITAL.

IT is some years ago that Dr. Doyen described his method of complete abdominal hysterectomy. The structures are rapidly divided between clamp forceps, a posterior flap is cut downwards into the posterior vaginal fornix, then the cervix is seized and hauled up, and the tumour is gradually made to turn a sort of somersault over the pubes. This method has seemed to me specially well suited for the cases mentioned below. In several of them the diagnosis had not been reached with any degree of certainty, in one case at any rate an erroneous one had been made, and on opening the abdomen inflammatory complications much obscured the anatomical conditions. Nevertheless, removal was accomplished with very little hæmorrhage and without interfering with the bladder and ureters. In these cases, except in one, there was no difficulty in excluding pregnancy. As regards the removal of the uterus, none of the women could possibly have had a viable child, and the occurrence of pregnancy would have rendered their case much more dangerous still. Vaginal and partial abdominal operations were out of the question. The abdominal operation at present most commonly adopted appears to be that of cutting across the cervix uteri. To do this one has to work from the pelvic wall inwards towards the cervix and in doing so branches of the uterine artery may be torn across deep in the pelvis or the ureter pushed inwards and either included in the clamp or ligatures, or indeed divided. In cutting across the cervix there is only a small communication with [illegible] aseptic beforehand. Indeed, with the vagina rendered aseptic the wider communication between it and the subperitoneal wound may aid drainage, for otherwise blood and pus may be retained owing to the narrowness of the cervical canal. In the one pregnant case, where maceration of the fœtus had already commenced, complete removal with the membranes unbroken preserved the wound from any contamination. As an additional reason for removing the cervix there is, perhaps, in some cases, a chance of the remaining cervix becoming malignant. In none of the cases could one define the cervix from the tumour with any certainty until the vagina was opened from above.

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[1] THE LANCET, April 4th, 1903, p. 937.

The operation.—The preparation of the patient included the shaving of the pubes and the swabbing out of the vagina with perchloride of mercury through a speculum. The anæmic cases had a subcutaneous saline infusion during the operation. The abdomen was opened just below the umbilicus, the bladder being drawn up nearly to this point in one case. After a preliminary examination the patient was raised to about 30 degrees from the horizontal (Trendelenburg position) and the rest of the abdomen was well shut off. Then the broad ligament, including the tube near the tumour, or when the ovary was diseased the ovarian ligament, was divided between clamps on each side. The tumour having been lifted out of the pelvis and drawn forwards as much as possible, a cut was made with blunt-topped scissors in the middle line behind the tumour through the peritoneum. Keeping close to the tumour, partly by cutting, partly by blunt separation, the posterior vaginal fornix was opened. Then the volsella seized the vaginal portion of the cervix and drew it upwards. Clamps were thereupon applied to the vaginal fornix laterally, then anteriorly, and after cutting it away the cervix could be drawn further upwards and the finger could commence to separate the bladder from the tumour by working from below upwards. The separation of the bladder seems so much more easily done in this way than from above downwards. Having reached this stage, on each side the base of the broad ligament forms a tense band reaching upwards to the tumour which includes the stretched-out uterine artery and its branches, upon which can now be placed clamps with a certainty of securing the vessels. When lobulated myomatous masses extended into the broad ligaments they were now drawn away with the main tumour, no force being required to shell them out. The ureters did not come into view at all, remaining outside the area of operation and being pushed downwards with the bladder. The volsella holding the cervix being continually drawn upon the tumour became gradually inverted over the pubes until there remained to be cut across the reflection of the peritoneum from the bladder on to the anterior aspect of the tumour. Now followed the application of ligatures over the numerous clamps and a strip of iodoform gauze was passed downwards through the vagina until it could be seized at the vulva, the upper end of the strip lying in the subperitoneal wound just above the cut edges of the vagina. Finally, the cut edges of the peritoneum were sutured together across the pelvis in the line of the excised uterus and broad ligaments. The urine was drawn off from the bladder and after two or three days the strip of gauze was removed and not replaced. In one or two cases the bladder and vagina were also irrigated for some days.

CASE 1.—The patient was under the care of Dr. W. R. Pollock who transferred her to me. She was a married woman, aged 48 years, who had never been pregnant. Menstruation had been regular from the age of 13 years until a year previously, when it became irregular. The penultimate period occurred six weeks previously, after an interval of three months, and lasted nine days, and the last period occurred a week previously, lasting four days. About three months previously the patient noted an enlargement of the abdomen, which continued, and micturition became frequent and painful, both by day and by night. The abdomen presented a central rounded elastic tumour corresponding to that of a sixth months pregnancy, with a lobule on the right side. The whole cavity of the pelvis appeared to be filled by a tumour. The os presented downwards and forwards; in front the finger could be passed up behind the symphysis. The tumour in Douglas's pouch felt hard and knobby. After opening the abdomen the omentum was found to be adherent to the tumour and was separated. A bluish-walled cyst next came into view and this proved to be a right-sided ovarian cyst which was tapped. It was then difficult to define the tubes except as swollen masses buried in adhesions. The right ovarian ligament was divided between clamps on the left side of the broad ligament, leaving *in situ* the left ovary and part of the tube. Then the uterus was removed. It was much enlarged by intramural fibroids and subperitoneal fibroids had extended laterally outwards into the broad ligaments. The cyst was a multilocular ovarian cyst with intracystic growths and highly vascular intercystic tissue. The patient recovered without incident except for a little discharge from the lower end of the abdominal wound.

CASE 2.—The patient, aged 46 years, was admitted to the Westminster Hospital and was transferred to me by Dr. Pollock. She was a married woman who had never been pregnant. She had menstruated regularly from the age of 16 years until three months previously, the quantity always being excessive. She first noticed a fulness of the abdomen, causing her to become short of breath, also pain in the left iliac region and bearing-down pain. For three weeks she had had painful micturition. The urine was small in amount, dark-green, and offensive. Shortly before admission she had a severe attack of metrorrhagia. On admission she was passing urine frequently, about one ounce at a time. The bladder was found to be greatly distended, containing two and a half pints of foul urine with much mucus and pus. The pelvis was filled by a firmly fixed hard tumour and the cervix could not be distinguished. On opening the abdomen a globular tumour about four inches in diameter was found wedged into the pelvis, with the bladder in front and above. Both ovaries were normal and were left *in situ* by dividing the broad ligaments. The tumour could not be distinguished from the cervix uteri until after removal, when the latter was found at the lower pole of the tumour. The bladder was densely adherent and was only separated from below upwards by using great care. After the operation the bladder was regularly washed out at first, there being a little blood in the urine, but she was able to leave the hospital wearing a belt three weeks after the operation.

CASE 3.—This patient was under the care of Dr. F. Norman. She was a married woman, aged 44 years, who, although long married, had never been pregnant before. She had been regular as regards menstruation until five months previously. She consulted Dr. Norman for an abdominal tumour and difficulty in passing urine and he diagnosed a retroverted gravid uterus with a large fibrous tumour above and in front of it. She was afterwards seen by an obstetric physician who said that she was not pregnant but had a fibrous tumour of the ovary. On opening the abdomen the bladder appeared containing a little urine. Behind this was a tumour of the size of a child's head buried in adhesions which was shelled out. This exposed a gravid uterus wedged into the pelvis corresponding in size to a four or five months pregnancy and the shelling out of the fibroid had left a large raw area involving deeply the uterine wall. Both ovaries were cystic and of the size of hens' eggs, the whole being surrounded by adhesions, but after dividing the ovarian ligaments I was able to remove the uterus. On laying it open a fœtus—beginning to macerate, of about four months—was found. The patient recovered rapidly. Afterwards she complained of climacteric symptoms but these ceased on treatment.

CASE 4 —The patient, aged 34 years, unmarried, had been seen by Dr. Dring, Dr. W. E. Passmore, and Dr. G. Norman. She had always had irregular menstruation and this had ceased for three months. An enlargement of the abdomen had been noted for a year and more recently attacks of abdominal pain, often very severe, until at last she was obliged to give up her work and go to bed. The abdomen was extremely painful and could not be handled much, but a tumour was obvious rising from the pelvis, filling the lower half of the abdomen and extending rather higher on the right side nearly, but not quite, up to the liver. It was dull to percussion and very tense, the umbilicus was bulging, and the flanks were resonant. Per rectum a tense swelling was felt. I thought that the tumour was an ovarian cyst complicated by serous peritonitis and anticipated extensive adhesions. On commencing the operation a little free fluid escaped and then the incision was extended to about eight inches. Not a single adhesion or sign of past peritonitis was noticed. Both ovaries were enlarged and cystic and were included in the removal. There was a small unaltered uterus buried in the lower part of the tumour, whilst the whole tumour formed much the shape of, but was larger than, a uterus at term and the total weight was 6½ pounds. Recovery ensued without incident and she returned to her work.

CASE 5.—An unmarried woman, aged 36 years, was admitted for a supposed iliac abscess following old-standing hip-joint disease. The patient, who had a strong tuberculous history on the mother's side, had, when aged 14 years, fallen on the hip; a swelling followed and for this and subsequent recurrences 17 operations had been done on the left hip. Healing finally occurred six years previously; since then the patient had had a flexed and adducted hip surrounded by scars but which allowed of walking two miles at a stretch. Her left knee had also been affected and was ankylosed in extension. About six months before the patient was ill for eight weeks with a "chill," the temperature reaching 103° F. Five weeks before she again had fever with a temperature of 104° when a swelling was found for the first time in the left iliac fossa. She had been in bed since. Menstruation had always been regular; the last occasion was just before admission, with some pain. The patient's appearance corresponded to the fair type of scrofula and she was slightly jaundiced. Nothing abnormal was found in connexion with the heart, the lungs, or the urine. During the week she was under observation the temperature was always between 100° and 101° at night and not below 99° by day. The right and left iliac regions were very tender to palpation; in the left iliac region a smooth tense swelling could be detected with some intestines over it and the swelling appeared to be continuous with a bulging into the vulvar orifice and higher up was to be felt through the rectum. The right side was so tense that nothing could be made out. The operation was begun by an incision in the left linea semilunaris and the first thing reached was a hard mass continuous with the uterus; next an ovarian cyst was found of about the size of a goose's egg. The right ovary proved to be normal but the uterus, buried in peritoneal adhesions, was a mass of fibroids, subperitoneal, intramural, and submucous, and was removed with the left ovary and tube, whilst the right was left. Nothing was found connected with the hip and the operation wound healed without any complication. 15 days after the operation the patient had a sudden rigor with some jaundice [illegible] k later, but after- [illegible] She was in good [illegible] *was a very per-* [illegible] le attacks beforehand may have been due to pelvic peritonitis, but they may also have been occasioned, as undoubtedly was the case after operation, by biliary inflammation.

Case 6.—This patient had been under the care of Mr. Sydney Clark of Leeds, who advised operation some time ago, and then under the care of Dr. F. Norman. She was a married woman, aged 36 years, who had had two children, the last five years before, but no subsequent pregnancy. Dysmenorrhœa and menorrhagia became so severe that she was examined under an anæsthetic some months previously. She improved somewhat under rest, but during the last three months she had had repeated attacks of metrorrhagia, the blood rapidly distending the uterus until pains started and expelled the clot. Meanwhile she had become increasingly anæmic. Extra exertion brought on a severe attack of inflammation with pain, especially in the left iliac region which at one time almost threatened to suppurate. Per vaginam a hard globular mass filled the pelvis, whilst the cervix was *displaced upwards* and to the *left side* where it was fixed. On opening the abdomen the left ovary and broad ligament were found imbedded in an œdematous mass of recent fibrous tissue, the right ovary was unaltered, and the uterine tumour was fixed down in the pelvis. The broad ligaments were first divided and then the uterus and tumour were removed, after which the left ovary was carefully examined. As it seemed likely not to be harmful and could only have been dissected out with difficulty it was left *in situ*, for it was important to finish the operation. The patient was very anæmic, but the blood lost was so very small that she quickly recovered, and on leaving the hospital a month later was already of a better colour. There was a single intramural fibroid of the size of a cricket ball bulging out on the posterior aspect of the uterus; the uterine cavity was quite normal, both as to length and character of the mucous membran [illegible] en the result of [illegible]

Case [illegible] F. W. Rix. She was an unmarried woman, aged 38 years, who had for upwards of two years noticed an increasing enlargement of the abdomen owing to a tumour, the menstruation meanwhile remaining normal. For the last three months she had had obstinate constipation, at times chronic obstruction, with some pain and vomiting. On examination the abdomen was found to be enlarged by two masses, the lower occupying the hypogastrium and especially the right iliac region. The upper mass occupied the umbilical and adjacent portions of the right lumbar and hypochondriac regions. It was partially moveable, partly attached to the lower mass by a neck, had intestines in front of it, but was free from the liver. On opening the abdomen the bladder had to be pushed downwards and then the wound was sufficiently enlarged to deliver the upper pedunculated mass; next, as both ovaries were found to be sound, the broad ligaments were divided with the tubes, the posterior vaginal fornix was opened and the cervix was drawn up. As the rest of the vaginal attachment and the base of the broad ligaments were divided internal to clamps the lateral masses were easily withdrawn with the uterus from the broad ligaments into which they had grown. The whole mass consisted of pedunculated and subsessile subperitoneal myomas, weighing 2½ pounds, around a small uterus. The patient's *recovery was entirely undisturbed.*

Case 8.—The patient was an unmarried woman, aged 34 years, who was admitted with an increasing abdominal tumour and very marked anæmia. The enlargement had been noted for several months. She had menstruated at regular intervals but had had prolonged periods and an excessive loss of blood with clots. There had been no special pain. An elastic lobulated swelling filled the pelvis and bulged into the vagina and rectum, whilst the cervix was high up in front, almost out of reach and inseparable from the tumour. An incision was made about six inches in length through a very thin abdominal wall; the uterine tumour presented whilst the bladder was well down behind the pubes. Both ovaries were cystic and enlarged to the size of hens' eggs but flattened. The uterus formed a greatly enlarged mass of separate intramural tumours of about the size of a double fist, in the middle of which was the uterine cavity, the cervix only being made out after removal. Nothing abnormal occurred for nine days after operation, although the patient was very weak and anæmic. The abdominal wall had been *sutured by a row of kangaroo-tail tendons closing the peritoneum*, another row united the recti, and the skin was sutured by silk. On the ninth day the skin sutures were removed and the wound, apparently uniting perfectly well, was dressed with gauze, wool, and a many-tailed bandage. The abdomen was quite flaccid and the bowels had been moved regularly from the second day. As it turned out I ought to have supported the abdominal wall with strapping in this instance, for about 12 hours later the patient, who had meanwhile been lying in bed without cough and had not had the bowels moved or had attempted to sit up, complained of pain in the chest and of a feeling that the intestines were coming out. Mr. G. L. Bunting, the house surgeon, found about two feet of intestine prolapsed through the upper part of the wound and already adherent to the dressings. He washed the intestines and breaking down more of the wound replaced the intestines and united the wall by deep interrupted sutures of fishing gut. No general peritonitis followed but a pelvic swelling, which was doubt- [illegible] meanwhile her general strength improved and the anæmia gradually diminished

The three points in favour of the measures adopted are:—(1) the certainty of the procedure in spite of inflammatory complications or the main tumour obscuring details; (2) the certainty of securing the uterine artery at a good distance from its origin; and (3) the ease with which the bladder and ureters are pushed out of the way of the field of operation.

Brook-street, W.

A CASE OF ACUTE BULLOUS ERUPTION AFFECTING A BUTCHER.

By ARTHUR S. MORLEY, F.R.C.S. Eng., L.R.C.P. Lond.
and
G. H. RANSOME, M.R.C.S. Eng., L.R.C.P. Lond.

The following case, resembling as it does in many particulars a series of cases occurring in butchers which was described by Mr. George Pernet and Dr. W. Bulloch,[1] appears to us to be of some interest and importance.

The patient was a butcher, aged 26 years. With regard to his previous history, five years before he had "blood poisoning in the leg caused by bad drains." He had had no other illness worthy of note. He had never had any venereal disease. He was accustomed to eat large quantities of meat and had lately kept rather late hours. He did not take much alcohol. He frequently pricked his fingers in hanging up meat and "for some days" had had a suppurating wound on his left middle finger. For three days he had noticed a circinate scaly patch on the back of his left forearm and thinking that it was ringworm he had "blistered it with some stuff from the chemist's." He consulted us on Feb. 9th and the following are our notes of his case. The patient was a very plethoric young man. There was a small unhealthy-looking suppurating wound on the side of the left middle finger. On the back of the left forearm was a circinate scaly area of about the size of a shilling presenting several points of pus. On microscopical examination of some broken hairs removed from the patch no ringworm fungus could be discovered, but as the lesion was clinically indistinguishable from ringworm it was treated as such, being swabbed over with pure formalin and dressed with white precipitate ointment. The wound on the finger was also cleaned and dressed with the same ointment. A mixture containing perchloride of iron and sulphate of magnesium was also prescribed. On the 11th there were blisters all round the patch with slight dermatitis. There were much irritation and pricking. The wound on the finger still looked unhealthy. On the 12th the dermatitis was spreading. The vesicles had burst, leaving a raw surface. On the 14th there were inflammation and swelling of the whole of the back of the left forearm. Lead lotion was applied. On the 20th there was slight erythemato-dermatitis in the bend of the elbow, spreading up on to the arm. The forearm was rather less inflamed. On the 22nd there were inflammation of the entire skin of the forearm with much œdema, slightly raised punctate erythema up the arm and on the chest, and slight erythema also on the *right* wrist. Considerable pain was present. The temperature was normal. An internal angular splint and hot boric fomentations were applied to the left arm. On the 23rd the dermatitis was spreading over the trunk. The evening temperature was 99° F. The patient was ordered to bed. Five grains of calomel were given at once and 10 minims of antimonial wine three times a day were prescribed and the arm was placed in a continuous boric bath. On the 24th there was a general eruption over the whole body. On the right forearm the erup erous resembled variola in the pustular stage; there were di wnwards shotty pustules, surrounded by areolæ of intense ulva, the redness. On the left forearm the epidermis was a und just leaving a raw bleeding surface, although the general i nt edges mation was rather less. On the left arm was a pa elvis in eruption with a few small scattered bullæ. On the s The and palms there were a few pustules and bullæ. On three neck were strings of vesicles and bullæ, varying in size fro In that of a large pin's head to that of a threepenny-piece, along ted the course of the descending superficial cervical nerves. There were also a few vesicles on the scalp. There was intense general erythematous dermatitis, especially over the chest. None of the bullæ were larger than raisins and many were flat-topped. There was a good deal of fœtor noticeable, particularly about the left forearm. The patient's general condition remained good. His temperature was 99·4°. The urine was normal; no albumin or sugar was present. On consultation with Dr. W. M. Crowfoot of Beccles creolin lotion (2 to 12 ounces) with liquor calcis was applied. On the 26th there was slight improvement. The pustules were drying up. There was still much general dermatitis. The temperature was 98·6°. There were some sweating and great irritation at night which disturbed sleep. The creolin seemed to allay the irritation. On the 28th the patient was improving. The vesicles were drying up. There were, however, some semi-purulent bullæ on the dorsum of the hands and feet. The original wound on the finger was not yet healed. There was much coarse general desquamation. The patient complained of a general feeling of weakness and malaise. The temperature was subnormal. The tongue was clean. Some of the serum and pus from the bullæ and pustules was drawn off and sent to Dr. Bulloch for bacteriological investigation. The antimony was discontinued and an effervescing quinine mixture was substituted and daily sponging with oatmeal and water was ordered. On March 3rd the patient was improving steadily but the original wound on the finger still discharged. There were a few discharging blebs about the ankles. His general health was improving. On the 6th there were impetigo-like scabs about the legs and knees. A boil had formed over the sacrum. The wound on the finger had now completely healed. On the 10th the patient was still desquamating freely. There were a few crusts and scabs on each leg. Three boils had formed in the axillæ. The patient was now a good deal thinner and had lost his plethoric appearance. From this time he made an uninterrupted recovery and is now completely well again.

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[1] British Journal of Dermatology, May and June, 1896.

Remarks.—The case was one which presented a good deal of difficulty in diagnosis. At first we were inclined to attribute the dermatitis to the use of pure formalin to the patch on the forearm. But when the generalised eruption appeared on Feb. 24th this diagnosis had to be reconsidered as it is difficult to imagine how a purely local application could give rise to such a general and varied eruption. The true significance of the septic wound on the finger then occurred to us and the similarity of our case to those collected by Mr. Pernet and Dr. Bulloch[2] was apparent. The cases which they described resembled ours in that they all occurred in persons whose occupations brought them into contact with recently killed animals and in most of them there was some small septic wound or whitlow to act as the *fons et origo mali*. In Mr. Pernet's own case[3] the lesions, although much more severe, were very similar in character and distribution. There were, however, much more pyrexia and general disturbance, and the case ended fatally. Eight cases are described, all of which occurred in butchers. Of these four had septic wounds about the hands, and in the others no mention is made of this point. The incubation period in all the cases was long and the eruption, when it started, rapidly spread all over the body. All these cases occurred in adults between the ages of 17 and 33 years. In none does syphilis appear to have played a part.

Nine other cases are also collected; in six of these wounds had been sustained either from bites of animals or during occupations involving the handling of carcases. Six cases recovered and three ended fatally. In Mr. Pernet's own case Dr. Bulloch isolated and cultivated a "diplococcus resembling the gonococcus but somewhat larger." These organisms were found in the original wound in the unruptured bullæ and (post mortem) in the lungs. In the present case Dr. Bulloch very kindly undertook the examination of the serum and pus but failed to find any organisms resembling those which occurred in Mr. Pernet's case. A pure culture of staphylo orresponding albus was obtained: as this is the
pregnancy and the she und in the normal epidermis it
large raw area involving tc cause a specific as dis-
ovaries were cystic and of th tion. It is to be regretted
being surrounded by adhesion for examination from the
ligaments I was able to remov the case, when improvement
a fœtus—beginning to mac chance of isolating a specific
was found. The patient re uch diminished.
complained of climacteric ase differs from those described
treatment. ess of the general symptoms and
CASE 4.—The patien ut the points of similarity, on the
seen by Dr. Dring, D ently striking. Another somewhat
s She had alway tion has been described by Duhring under
the ceas me of "dermatitis herpetiformis," and at the discussion on this disease Dr. T. Colcott Fox stated that many of the cases started in lesions closely resembling those of herpes and tinea circinata,[1] and our case falls in line with this description. The same condition has also been described under the name of "*pemphigus en petites bulles*," and Dr. Crowfoot, who saw our case in consultation with us, said that it was similar to a case, which had been under his care, in which this diagnosis had been made. It is a point of some interest that the patient in this case was a tanner who would of course come into contact with the hides of animals. It would be of value to know the occupations of the original patients whose condition was described by Duhring, as it seems a rather plausible suggestion that the diseases described by him and by Mr. Pernet and Dr. Bulloch are closely connected. In conclusion, we wish to express our gratitude to Dr. Bulloch, to Dr. Crowfoot, and to Mr. Pernet for the advice and assistance which they have given us in the investigation and treatment of this case.

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[2] Ibid. [3] Ibid., vol. vii., 1895. [4] Ibid., 1898.

NATIONAL ASYLUM OF RIO DE JANEIRO FOR INSANITY.—Dr. Juliano Moreira, professor of psychiatry and neurology in the medical school of Bahia and co-editor of the *Gazeta Medica da Bahia*, has been appointed director of the National Asylum of Rio de Janeiro. This institution is to be enlarged shortly to 1000 beds, funds for the erection of the buildings being already available and the site purchased. Plans for a new epileptic ward are being prepared, while new children's wards have been already declared open.

A CASE OF BULLET WOUND OF THE BRAIN, WITH PARTIAL MOTOR PARESIS AND HEMIANOPSIA.

EXPERIMENTAL DETERMINATION OF THE LESION.

BY N. BISHOP HARMAN, M.A., M.B. CANTAB., F.R.C.S. ENG.,
OPHTHALMIC SURGEON, BELGRAVE HOSPITAL FOR CHILDREN; DEMONSTRATOR OF PATHOLOGY, MIDDLESEX HOSPITAL; EXAMINER IN ANATOMY, CAMBRIDGE UNIVERSITY; LATE CIVIL SURGEON, FIELD FORCE, SOUTH AFRICA;

AND

A. A. BRADBURNE, L.R.C.P., L.R.C.S. EDIN., L.F.P.S. GLASG.,
LATE CIVIL SURGEON, CONNAUGHT HOSPITAL, ALDERSHOT.

THE case is that of a private soldier who was shot whilst asleep in his tent in South Africa. The shot was believed to come from Boer snipers. The patient stated that from the time he turned in on the eve of the night of the incident he remembered nothing until he regained consciousness of his position in the military hospital. He then noticed that he had lost the power of movement on his right side and that he could not see objects which were situated on that side. His history shows that he was struck on the head by a bullet at 2 A.M. on Dec. 10th, 1901, and that he remained unconscious until the following Christmas Eve.

PHYSICAL EXAMINATION.

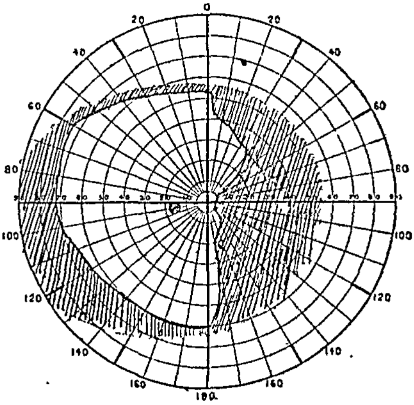
1. *The wounds.*—Examination of the head showed two wounds of the left side involving in each case the scalp and bones of the skull. Of these, one was situated at the anterior part of the parietal bone and the other in the neighbourhood of the external occipital protuberance. From the condition of the wounds there could be little doubt that the parietal wound was the site of entrance of the missile and that the occipital wound was the site of exit, for the wound of the parietal bone was a clean round hole, such as would be made by a good drill, whilst the occipital wound was a trifle larger but still fairly clean-cut hole. Both scalp wounds have healed perfectly, leaving little external trace of the injury; there is, however, some deficiency of the bone immediately beneath the scars and small depressions can be felt.

2. *The bullet.*—Whilst nothing definite could be ascertained from those who were at hand at the time of the incident the nature of was a modern small-gauge high velocity on a line coir ased bullets used by the Boers were Mauser (calibre ·275) in the vast majority of cases; there were some few other Mausers of Spanish calibre (·250), a fair number of Lee-Metford of British origin (·303), occasional Stehr of Austrian pattern (·350), and modifications of the Mauser bullet as regards its plan al sheath such as Jeffrey's sporting bullet with split sides testine en noses That the missile could not have been of surgeon, named order is evident, since the wounds, from the the upr ng nature of these bullets, would have been much the dre erious. Stehr rifles were not used in great numbers, more a large stores of this ammunition were found in the wall zine at Pretoria. It is therefore probable that the perl le was either Mauser or Lee-Metford, though which of le se cannot be determined, and it matters little for the ferences of bullet (Mauser ·275, Lee-Metford ·303) and heir effects are but small.

3. *Physical signs and visual fields.*—When the patient regained consciousness he was paralysed on the right side and could not see towards that side with either eye. In February, 1902, he was at the Connaught Hospital, Aldershot, where he came under the care of one of us (A. A. B.). At this time motor recovery was almost complete: the right arm alone remained weak but a fair range of movement was possible; the extensor reflexes were exaggerated. There was a slight degree of wasting of the muscles of the right limbs as compared with the left. In the facial region the right cheek was flatter than the left; there was weakness of the muscles of expression, especially of the corrugator supercilii, those about the root of the nose, and at the angle of the mouth. The tongue could be protruded perfectly and there was no involuntary deflection from the straight line; the uvula also acted normally. The patient did not at times speak plainly and said that he was occasionally at a loss for a word. Each letter of the alphabet could be pronounced clearly.

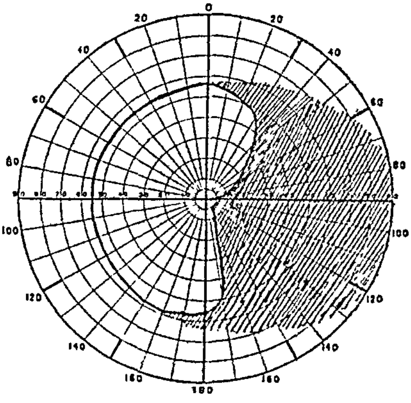
Visual acuity with each eye was full (Sn. $\frac{6}{6}$ and Jg. 1). On taking the visual fields with the perimeter it was found that the right half of each field was blind; the area within the 5° circle of central vision was intact in each eye (see *Figs.* 1 and 1A). In addition to the loss of the right half of the field on the left side there was a rim of blindness in this eye starting from the blind right half and embracing the whole of the intact area of the left half, the rim being broadest laterally (see *Fig.* 1). By the ordinary method of taking the visual field with the head directly opposite the fixation point the corresponding half of the right field showed no such rim of blindness, the field being "full" to the normal limit; to ascertain the possibility of any defect beyond the limit bounded by the projection of the nose the field of the right eye was taken in another manner. The head was placed on the rest and rotated to the left through 45°; the left eye being covered the right was diverted outwards to obtain fixation upon the spot marking the pivot of the perimeter; the nasal field was again mapped out upon a chart in which

FIG. 1.



Perimeter chart of the left eye.

FIG. 1A.

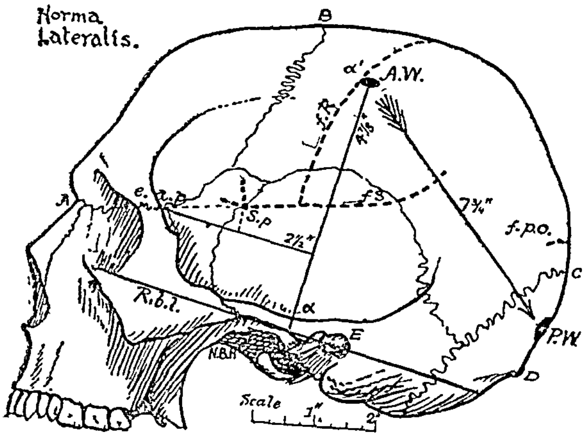


Perimeter chart of the right eye.

the limit of the field in this direction had already been marked by the like examination of another soldier (X) of the same age and similar mental capacity. It was found by this method that the periphery of the field of the patient towards the nasal side of the right eye was full, it coinciding very nearly with the control field of X. By ophthalmoscopic examination (on Feb. 15th, 1902) the retina was seen to be of a deeper red than usual, the veins were slightly engorged, and the arteries were somewhat indistinct and tortuous on the blind sides. The papillæ and maculæ were normal and the light reflexes were marked. Both pupils were of equal size and reacted equally well. Wernicke's hemiopic pupillary reaction was not present and there was no indication of "word-blindness" phenomena.

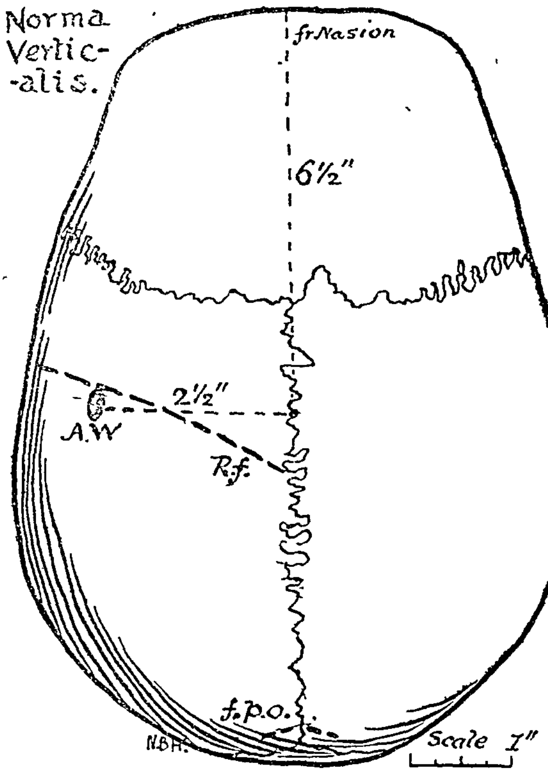
4. *Topography.*—Careful measurements of the sites of the wounds were made both in relation to Reid's base line and to the prominent bony landmarks, and the position of these was compared with the positions of the cerebral convolutions and fissures of the superficies, as obtained by the most approved schemes of measurement. (Figs. 2, 3, and 4 show the head thus mapped out.)

FIG. 2.



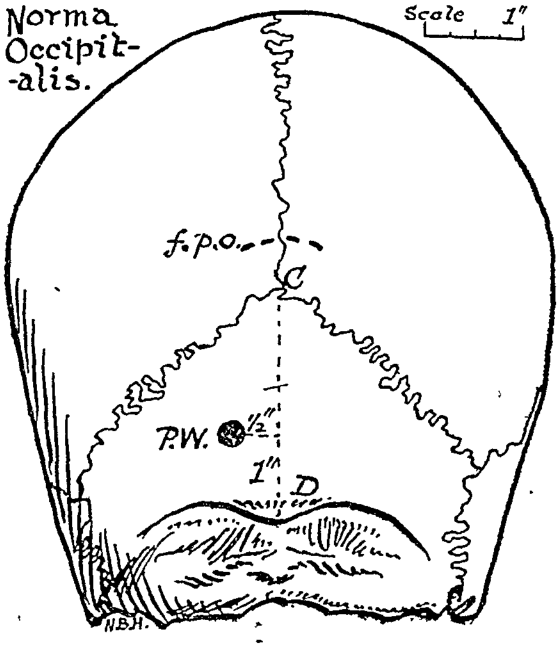
To show relation of wounds to base and other lines on the skull. See also Figs. 3 and 4. For explanation of lettering see the index at the end of the paper.

FIG. 3.



To show measurements. For lettering see the index at the end of the paper

FIG. 4.



To show measurements. For lettering see the index at the end of the paper.

(*a*) *General measurements.*—The general measurements were as follows: A from B, nasion to bregma (the bregmatic position was not certain), about 5 inches; from A to C nasion to lambda, 12 inches; from A to D, nasion to inion, 14¾ inches; from E to E, from right to left external auditory meatus over the vertex, 14¼ inches, and the distance which the vertex was situated from the nasion, 8 inches.

(*b*) *Parietal wound.*—A line (α α') drawn perpendicularly to Reid's base line to meet the centre of the wound measured 4 inches; the continuation of this line (α α') to the sagittal suture measured a further 2½ inches. This perpendicular (α α') is situated 2½ inches from the external angular process measured parallel to the base line, and at the sagittal suture 6½ inches from the nasion.

(*c*) *Occipital wound.*—The centre of the wound is situated 1 inch from the most prominent part of the external occipital protuberance (or 2½ inches up from the base line) and half an inch to the left of the median longitudinal line as continued from the sagittal suture through the lambda to the external occipital process.

5 *Relation of wounds to cerebral cortex.*—The position of the principal fissures is given in dotted lines on the same figures; they were obtained in the manner described by Cunningham.[1] A skull of similar measurements to the head of the patient was marked out with these lines and the measurements for the wounds sites, and the whole was drawn with the aid of Broca's craniograph. It was found that the parietal wound was situated just behind the fissure of Rolando on a level with that part thereof which should be immediately posterior to the bifurcation of the superior frontal sulcus to form the precentral sulcus. The occipital wound fell in the occipital lobe about the level of the calcarine fissure.

6. *Experimental determination.*[2]—As a means of checking these results, preparing a graphic representation of the lesion, and to demonstrate the actual grey areas and white tracts penetrated by the bullet the lesion was made experimentally upon a recently deceased subject (a male, aged 48 years) the measurements of whose head, as determined by the usual craniometric methods, corresponded exactly with those of the head of the patient. The subject had been dead

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[1] D. Cunningham: Journal of Anatomy and Physiology, vol. xxiv., 1890.

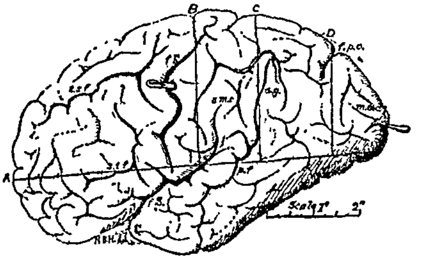
[2] This method of demonstrating the lesions of bullet wounds of the brain was described by N. B. H. before the Pathological Society of London in July, 1902.

about ten hours when the skin of the neck was opened in the middle line and the common carotid arteries of each side were dissected out; into each of them in turn a cannula was inserted through which about two ounces of formalin (40 per cent.) were slowly injected until the formalin escaped from the nostrils. The vessels were ligatured and the body was left for five hours. The sites of the wounds were then found by the proper measurements and marked by holes drilled into the skull. The scalp was removed and the wound areas were trephined, a fine stilette was passed from hole to hole, and over this was passed a glass tube of the same size as a Mauser bullet The skull-cap was then sawn off and the brain, which had become quite firm from the hardening agent, was removed and placed in a 5 per cent. solution of the same preservative. As regards the position of the trephine holes to the vessels on the inner surface of the skull, it was noted that the parietal wound had not cut into any large branch of the middle meningeal artery, it was well above the fork formed by its two large anterior and posterior branches, whilst the occipital hole had failed to injure either the superior longitudinal, the lateral, or torcular sinuses.

7. *The brain lesion.*—Fig. 5 is reduced from a scale drawing of the lateral surface of the left hemisphere; the probe is lying in the track of the lesion. The arrangement of the convolutions is strikingly "average" and the brain might have supplied the model for an anatomical plate The entrance wound is noted in the anterior edge of the ascending [illegible] of [illegible] es [illegible] nal convolutions, under the angular gyrus to the posterior extremity of the occipital lobe. Fig. 6 shows the mesial aspect of the hemisphere; the exit wound is noted at the posterior inferior angle of the middle occipital convolution as it blends with the cuneus. Vertical sections of the hemisphere were made at B, C, and D (see Figs 7, 8, and 9) In section B, which cuts through the ascending parietal convolution, the track of the lesion is so situated that it is distant only a few millimetres from the grey matter forming the greater part of this ascending parietal convolution and in such a manner that it must have completely cut off the communications with this area In section C, which cuts through the angular gyrus, the lesion is deeper, but here, again, it cannot have failed to cut off communications with the whole of this important area. In section D, through the parieto-occipital fissure and the apex of the cuneus, the lesion again dominates the communications to the cuneus and occipital cortex through the occipito-thalamic radiation. Thus at all points the lesion has dominated the cortex behind the fissure of Rolando; it has either directly destroyed it in its passage or else the line of the lesion is so close to it that it could not fail to have been destroyed for functional purposes by the disturbance set up by the rapid transit of a missile in such a line; further, through the greater part of its length the occipito-thalamic radiation of Gratiolet has been traversed by the lesion A more completely destructive lesion short of excision could not well be devised.

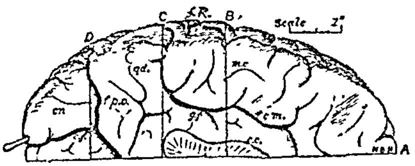
That the passage of a small gauge bullet at a high velocity

FIG 5.



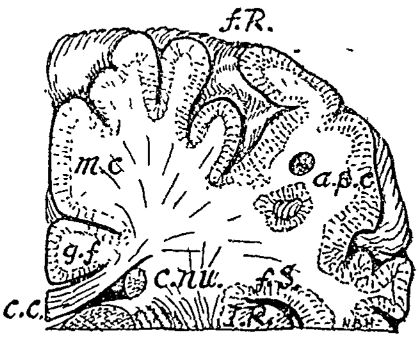
Lateral surface of the left hemisphere. A probe has been passed along the track of the lesion

FIG. 6



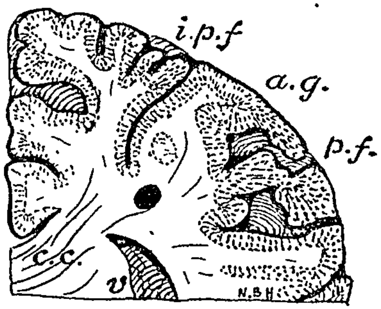
Mesial aspect of the hemisphere

FIG. 7.



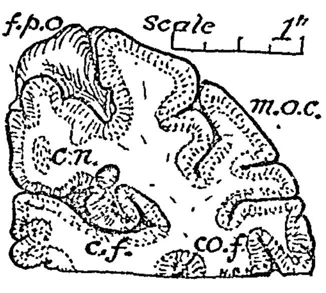
Section through hemisphere at B (Fig 6).

FIG. 8.



Section through hemisphere at C (Fig 6)

FIG. 9



Section through hemisphere at D (Fig 6)

cleanly through soft tissues will produce damage over and above the direct destruction incident to its passage we have seen many proofs in the intractable neuralgia in wounds of limbs, in cases where the nerves affected could not by any means have been directly involved. In some such cases the absence of any traceable morbid condition has been demonstrated by operative examination.[3] The production of this disability in structures distant from the actual lesion has been ascribed to the shock produced by the "expanding force" of the missile. If such effects are marked in the case of passage through the soft parts of a limb, composed of comparatively coarsely organised tissues, how much greater the effect of such a force acting upon the brain—first from the blow to the skull and, secondly, from the passage of the missile through a highly organised nerve mass inclosed within an unyielding envelope.

CONCLUSIONS.

Whilst it would be unwise to base any elaborate deductions upon one set of observations there are certain points of interest which arise out of this case and the experimental demonstration thereof.

The transient motor paresis.—According to the localisation of the motor areas by Ferrier, Horsley, and Beevor the destruction of the ascending parietal convolution at the wound of entrance should have produced a serious and probably permanent paralysis. The man has early and almost completely recovered from the motor disability. This fits in with the more recent localisation of the motor areas in the anthropoid apes by Sherrington and Grünbaum[4] in which the area was bounded posteriorly by the Rolandic fissure and did not extend to the ascending parietal fissure or that part of it dipping into the fissure. The shock of the injury in the region of the ascending frontal convolution one would judge to be quite enough to account for the symptoms described. It is also noteworthy that the entrance wound is nearest the site of the arm area, in which limb there remains some slight weakness.

The hemianopsia.—The penetration of the occipito-thalamic radiation and the undermining of the angular gyrus and occipital lobes are so thorough that at first sight it would appear that no evidence could be gleaned from this case in the vexed question of the relation of psychic and perceptive visual centres to those cortical areas; also the general features of the fields of vision in the preservation of the central areas (complete within the 5° circle) and the retention of the portions supplied by the right side of the cortex are so well known as to call for no special comment. There is, however, one point of importance—the rim of blindness found along the left side of the left field, indicating the existence of a defect in the area held to be supplied by nerve fibres connected with the right cortex. How may this rim of blindness be accounted for? There is, of course, no evidence that the man's field was full in this direction prior to the injury, but an explanation obtained by a negation of this sort is hardly tenable. The matter is complicated by the fact that the blind rim corresponds to that portion of the right field normally absent—it is amblyopic on account of disuse caused by the obstructing nose; as has been stated no further diminution of this region could be discovered. The blind rim might be held to be a defect due to intraocular conditions following the injury, but there were neither ophthalmoscopic changes nor defective pupillary reaction to lend support to such a view. There remain two possible explanations. One is the hypothesis of Charcot[5] that there is a double decussation of the optic nerve and its connexions, one at the chiasma and another in the hemisphere; this scheme would supply the suggestion that the fibres derived from this blind rim were really connected with the left cortex and were destroyed within the left hemisphere after they had made their secondary crossing from the right. In the absence of any more direct and more feasible explanation the occurrence of this blind rim might perhaps be held to support Charcot's hypothesis. The second and more likely solution of the difficulty, and one which leads to a rather interesting deduction, is that the rim is the result of an injury to the right cortex. It has been noted how close to the middle line was the presumptive wound of exit, only half an inch to the left of that line. The right occipital cortex may well be held to be within the danger zone of this wound. In what way an injury occurred it is impossible to determine. Shock alone may have been of sufficient intensity permanently to incapacitate its cellular structure, mayhap the damage arose in some small hæmorrhage or in a disturbance of its venous circulation by a clot in one or other of the sinuses immediately contiguous to the wound. With an acceptance of this solution—damage to the immediately contiguous right occipital cortex—there follows the interesting deduction that the periphery of the visual field is connected with that part of the cortex situated in the posterior inferior margin of the middle occipital convolution as it blends with the mesial area known as the cuneus.

Whilst it would be presumption to base any elaborate conclusions on such evidence as this—that of a single case, and one in which an injury to the right cortex cannot be proved to exist, or existing its nature and cause cannot be determined—yet it may be noted that this deduction will very well harmonise with the generally accepted view that the central area of the visual field has its cortical connexion towards the apex of the cuneus, and support the view that the perceptive centre for vision is situated in the occipital and cuneate regions rather than in the more anterior angular gyrus. Of the psychic visual centre this case gives no information.

Index to the figures—The scale is ma[illegible] 8 which are the same as 9. A., nasion; I[illegible] (external occipital protuberance); E., c[illegible] anterior wound; P.W., posterior wound; e.a.p., external angular process; S.p., Sylvian point; I.R., island of Reil; v., posterior horn of the lateral ventricle; c c., corpus callosum; c.nu., tail of the caudate nucleus; co.f., collateral fissure; c.f., calcarine fissure; f.R., Rolandic fissure; f.S., Sylvian fissure; f.p.o., parieto-occipital fissure; f.c.m., calloso-marginal fissure; ip.f., interparietal fissure; p.f., parellel fissure; s s.f., superior frontal sulcus; s.i.f., inferior frontal sulcus; m.o.c., middle occipital convolution; a.g., angular gyrus; g.f., gyrus fornicatus; sm.c., supra-marginal convolution; cn., cuneus; q.d., quadrate lobe; and m.c., marginal convolution.

CASE OF A MAN BLIND FROM CONGENITAL CATARACT WHO ACQUIRED SIGHT AFTER AN OPERATION WHEN HE WAS 30 YEARS OF AGE.

By A. MAITLAND RAMSAY, M.D. GLASG.,
SURGEON TO THE OPHTHALMIC INSTITUTION, GLASGOW ROYAL INFIRMARY.

A MAN, aged 30 years, blind from birth, was brought to the Glasgow Ophthalmic Institution on Feb. 24th, 1903. He was one of a family of seven, and although, as far as could be ascertained, there was no hereditary predisposition to blindness, one sister, as well as himself, was born blind and another (who died at the age of 35 years) lost her sight when she was two years old. The rest—a brother and three sisters—are said to have been able to see perfectly well. The sister who was born blind, now 33 years of age, was brought up in the Blind Asylum, but the patient himself was allowed to run about as he pleased, no attempt to educate him having ever been made. He became, however, so familiar with the country district (a few miles from Glasgow) in which he resided that he could go about without the slightest fear; and his hearing was so acute that he knew at once if there was anything unusual on a road along which he was walking, and thus he never had any difficulty in keeping himself out of danger. The "sense of obstacles" spoken of by psychologists was indeed developed to such a degree that he hardly ever came in contact with what might be in the way; he seemed to perceive the obstruction as he approached and was thereby enabled to avoid it. As he passed along a road he could tell a wall from a hedge by the sound of the air coming through the leaves and branches of the latter. He could easily go on an errand to any house in his native village, for the resonance of his footfall—quite different in sound when he was passing a building from what it was when he was opposite an open space—enabled him, perfectly familiar as he was with his surroundings, to count the houses as he passed, and thus to turn corners and finally to stop at the one which he wanted. In a strange place, however, he could never trust himself to go about without a guide, because his sense of hearing conveyed nothing to him beyond the difference between passing buildings or open spaces, and number could not come in to render the auditory impressions definite. Experience taught him in the same manner to find his way about the garden in which he worked, and he learnt to pluck flowers, to arrange them in bunches, and to pack them in boxes for the market not only without the slightest difficulty but with very great accuracy. He distinguished different blossoms partly by touch but chiefly by smell, and by dint of asking questions he got at last to know so much about their form and colour that he could arrange them in a bouquet. He recognised the presence of strangers in the house chiefly by the sense of hearing—for example, he could discriminate persons whom he knew by the sound of their respiration, and he was at once cognisant of any breathing with which he was unfamiliar. Besides this, however, he said that if he came into the house when any strange person was there he experienced a sense of "fulness." He was unable to put this in clearer terms and the feeling may correspond to that ascribed by Wardrop in 1813 in his "History of James Mitchell, a Boy Born Blind and Deaf," to a highly developed sense of smell. Occasionally he worked in the harvest field and he could bind the corn and arrange the stooks as well as any of the other labourers. He said that he was even able to build the sheaves on a cart and naively added that although the load might not look "elegant" yet it always remained firm on the cart. At other times he assisted in trimming turnips with a large sharp knife and only on one occasion did he cut himself. In the winter he was employed by a farmer to feed cattle, and as he walked along the byre his sense of hearing guided him unerringly to the stalls where the cows stood, so that he had no difficulty whatever in carrying food to them and placing it in the troughs.

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[3] Clinton T. Dent: Brit. Med. Jour., February, 1900, p. 406.

[4] Sherrington and Grunbaum: Transactions of the Pathological Society of London, 1902, p. 130.

[5] McKendrick's Text-book of Physiology, 1889, vol. ii., Fig. 283, p. 550.

The eyes were small and deeply sunk and they moved continuously in the sockets and there was a very pronounced alternating convergent squint. The irides were natural, the pupils were active, and the intraocular tension was normal, but both lenses were completely cataractous. The patient was quite unable to distinguish objects, although he could tell day from night and could easily perceive a light and locate it accurately; and in this he resembled the boy Mitchell who could clearly discriminate light; but, unlike him, he does not appear to have had pleasure in its brightness, and as he seems to have had no perception of bright colours the opacity was probably more complete. As the cataract seemed to be the only obstacle to vision I resolved to operate and I extracted the lens from the right eye on March 11th and that from the left eye a week later. Prior to th

in order

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to control

ness proved afterwards to be very troublesome, the constant motion under the dressings causing so much irritation that the bandage had to be removed and dark spectacles substituted. Both lenses were small and shrivelled and the nucleus of the right was calcareous. For about ten days after the operation on the left eye the patient appeared to be quite dazed and could not realise that he was seeing. The size of everything in the ward seemed to be very much exaggerated and on that account he had great difficulty in interpreting what he saw, but as he is inquisitive and has a keen desire for knowledge he took from the outset a most intelligent interest in his own case and asked numerous questions of his fellow patients. The first thing he actually perceived was the face of the house surgeon. He said that at first he did not know what it was that he saw, but that when Dr. Stewart asked him to look down the sense of hearing guided his eye straight to the point whence the sound came, and then, recalling what he knew from having felt his own face, he realised that this must be a mouth, and that he must be looking at a face. Once he properly understood what vision meant he made very rapid progress and his extraordinarily retentive memory enabled him to take full advantage of everything that he was

for the first time also became aware of the little red band in the centre and at once called attention to it. When he was shown a bunch of daffodils he recognised them by their smell and immediately said that they must be yellow. The colour that took him longest to master was green, but he can now name all ordinary tints readily and correctly. His difficulty with green is hard to explain unless it be that with green he has no smell-association such as he had with coloured flowers. Unlike Locke's blind man, who imagined that "scarlet was like the sound of a trumpet," he does not seem to connect any distinct ideas with particular colours except that he said that red gave him a feeling of pleasure and that the first time he saw yellow he became so sick that he thought he would vomit. The latter feeling, however, has never recurred.

He rapidly learned the letters of the alphabet and figures and he will soon be able to read and to reckon. From the very first he saw everything in its actual position, showing that the retinal inversion of a picture is interpreted psychically without any education.

One of the things that gave him peculiar pleasure was looking at the face of a watch which he had borrowed from a fellow patient. Within a day or two of his having got the loan of it he astonished me by announcing that he was able to tell the time. When I asked him how he had learned so quickly he explained that he did not understand the figures on the dial, but he had been told how to count the hours and that each space between the "black marks" meant five minutes. When asked to distinguish between a ball and a toy brick he looked at them attentively for a considerable time, his hands meanwhile moving nervously, as if he were trying to translate what he saw by comparing it with an imaginary tactile impression, and then he described both correctly. He explained that he was so much in the habit of handling objects that he had come to have a "notion in his mind" regarding the form of things. He could count accurately after he had looked at objects one by one and seemed to derive much help in his calculations by pointing with his finger. Here again he seems to translate touch into vision and to arrive at a perception of the whole through the perception of the individual parts. He cannot take things in at a glance. He does not see the passers-by on the opposite side of the street quickly. He looks most intently and moves his head backwards and forwards and from side to side as if trying to get a view of them all round before he can make up his mind what he is seeing; in a room, however, he can distinguish things much more quickly. With any complex outline, however, or group of outlines, he still has considerable difficulty, though pictures are no longer to him, as they were at first, mere masses of confused colour.

He was able to estimate size and distance more readily than might have been anticipated, although he said that he felt that if he were out of doors by himself he would be "wandered." From the time he got out of bed after the operation he could guide himself with ease through a doorway and walk about on the level, but he had considerable difficulty in ascending a stair, because the steps seemed so high that to begin with he raised his foot much farther than was necessary and without meaning to do so went up two steps at a time. Whenever he discovered his mistake he began to pay attention to the rise of each and he has now no difficulty in estimating their height. This, of course, was part of his difficulty of judging distance, though when he first looked out of a window on to the street and saw the pavement below he said that he felt that if he had a stick he should be able to touch it and thus he had not the feeling recorded of the boy operated upon by Cheselden in 1728 who thought that all objects he saw "touched his eyes," just as he had formerly got his impressions of things by pressure against the skin. Unlike him, also, the patient did not retain his faculty of moving easily about in the dark. Before the operation he could guide himself fearlessly through a ward without coming in contact with the beds or any other obstacle that might be in the way, but since he has been able to see he says that he has lost all that feeling of confidence and when his eyes are shut he is afraid to move and is impelled to open them to ascertain where he is going—so much so that he does not know what he would do if he again became blind.

The squint and ocular restlessness are less pronounced than they were, but the patient has still very little control over the movements of the eyes. When he is requested to look in any particular direction he is unable to cause the ocular muscles to do what he wishes, and the balls oscillate and one or other turns inwards to such an extent that a portion of the cornea is hidden by the inner canthus. This want of control renders it very difficult to make a satisfactory ophthalmoscopic examination, but as far as can be made out the fundus oculi is normal; indeed, the functional activity of the optic nerves since the cataracts were removed is very remarkable and is in striking contrast to the purposeless muscular movements. Disuse has crippled the function of the latter, but seems to have had but little effect on the activity of the former. The eye is a receptive organ and the light that gained access to the retina through the opaque lens proved stimulus sufficient to maintain the optic nerve in health, while the want of visual power deprived the coördinating centre in the brain of all stimulus to develop and hence the ocular muscles are not trained to obey the dictates of the will

I am indebted to Mr. W. G. MacDonald, one of my students, for bringing this case under my notice.

Glasgow.

SOME OBSERVATIONS ON THE BLOOD GASES IN DIABETES.

BY A. P. BEDDARD, M.A., M.D. CANTAB.,
ASSISTANT PHYSICIAN, GUY'S HOSPITAL; PHYSICIAN, WEST LONDON HOSPITAL;

M. S. PEMBREY, M.A., M.D. OXON.,
LECTURER IN PHYSIOLOGY AT GUY'S HOSPITAL;

AND

E. I. SPRIGGS, M.D. LOND.,
PHYSICIAN TO OUT-PATIENTS TO THE VICTORIA HOSPITAL FOR CHILDREN, CHELSEA, AND TO THE CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA-PARK; DEMONSTRATOR OF PHYSIOLOGY AND GULL RESEARCH STUDENT IN PATHOLOGY, GUY'S HOSPITAL.

(From the Physiological Laboratory, Guy's Hospital.)

Minkowski and Stadelmann were, so far as we know, the founders in the early "eighties" of the view that in diabetic coma we have to deal with an acid intoxication. In the 20 years which have since elapsed this view has steadily gained ground.

It has been shown by Walter that a condition of unconsciousness with deep respirations can be produced in herbivora by the action of acids put into the stomach, and in these animals the alkalinity of the blood was diminished and its content of carbon dioxide was reduced from 32 to 2 or 3 volumes per cent. In carnivora similar results have been obtained though with less ease, owing to the chemical mechanism by which flesh-eaters are able to neutralise considerable quantities of acid by the production of ammonia. In man it is known that the alkalinity of the blood is diminished in diabetic coma and Kraus (confirming Minkowski) found the CO_2 content of the blood constantly low in 13 cases of diabetic coma. The average was about 15 volumes per cent., with a maximum of 19·8 and a minimum of 9·8 volumes per cent. In some of these cases titration of the blood was carried out and the alkalinity was found to be depressed.

We have made estimations of the carbon dioxide in the blood and its alkalinity in 23 samples of blood from 15 cases, eight being cases of diabetic coma, three of diabetes without coma, and four being from cases of œdema of the lung, pancreatic disease, pernicious anæmia, and ascites respectively. We have also estimated in eight cases the carbon dioxide in the urine and in six cases the capacity of the blood and urine to take up that gas. In two of the cases of diabetic coma the ammonia, the oxybutyric acid and acetone, and the total nitrogen in the urine were also estimated daily, as well as the nitrogen in the food. Histological examinations of the pancreas have been made in five fatal cases.

The gases in the blood were estimated with Hill's blood pump, five or more cubic centimetres being taken for the analysis from a vein by means of an antitoxin syringe. In several cases duplicate estimations were also made with the apparatus of Barcroft and Haldane. The alkalinity of the blood was estimated by Wright's method and is expressed below in terms of normal alkali. The average alkalinity of healthy serum corresponds, according to Wright, to about $\frac{N}{30}$ NaOH. In our non-diabetic cases it has been rather higher—e.g., from $\frac{N}{25}$ to $\frac{N}{30}$.[1]

We are deeply indebted to the physicians of Guy's Hospital for permission to investigate their cases and especially to Dr. Newton Pitt under whose care were five of the patients.

An account in full of the observations, which commenced last October and are still in progress, will in course of time be published. The accompanying table gives some of the more important figures which have been obtained.

TABLE OF RESULTS.

Case.	Remarks.	Date.	Carbon dioxide in the blood (volumes per cent.).	Alkalinity of the blood.	Total carbon dioxide in the urine (volumes per cent.).	Saturation capacity for carbon dioxide of the blood (volumes per cent.).	Saturation capacity for carbon dioxide of the urine (volumes per cent.).
1	Diabetic coma.	Oct. 14th, 1902.	13·0	$\frac{N}{70}$	—	—	—
	After alkali administration.	Oct. 15th, 1902.	16·8	—	—	—	—
2	Diabetic coma.	Oct. 17th, 1902.	24·0	$\frac{N}{80}$	—	—	—
3	Diabetic coma.	Dec. 2nd, 1902.	14·8	$\frac{N}{57}$	—	—	—
	After alkali.	Dec. 3rd, 1902.	—	$\frac{N}{50}$	—	220	—
	Later.	Dec. 3rd, 1902.	(a) 13·8 (b) 13·7	$\frac{N}{45}$	5·1	—	82
	Later.	—	—	$\frac{N}{45}$	—	—	—
4	Diabetic coma.	Dec. 14th, 1902.	(a) 22·8 (b) 22·1	$\frac{N}{60}$	5·0	301	91
5	Diabetes.	Dec. 19th, 1902.	33·4	$\frac{N}{32}$	7·1	208	99
	After alkali some days.	Feb. 19th, 1903.	28·1	$\frac{N}{30}$	8·9	238	93
6	Diabetes.	Feb. 9th, 1903.	24·2	$\frac{N}{45}$	—	—	—
7	Diabetic coma.	Feb. 9th, 1903.	20·1	$\frac{N}{90}$	—	—	—
	After alkali administration	Feb. 9th, 1903.	—	$\frac{N}{50}$	—	—	—
8	Dyspnœa.	Feb. 11th, 1903.	25·5	$\frac{N}{30}$	—	—	—
		Feb. 17th, 1903.	43·0	$\frac{N}{27}$	11·1	—	—
		Feb. 20th, 1903.	38·8	$\frac{N}{27}$	8·4	242	—
9	Pancreatic disease.	Feb. 21st, 1903.	56·5	$\frac{N}{25}$	—	—	87·1
10	Ascites.	Feb. 26th, 1903.	48·5	$\frac{N}{25}$	6·7	226	139
11	Diabetic coma.	March 17th, 1903.	14·1 12·2	$\frac{N}{45}$	—	—	—
	After alkali (arm bandaged for 4 minutes).	March 19th, 1903.	39·0	$\frac{N}{27}$	—	—	—
12	Pernicious anæmia.	March 30th, 1903.	43·2	$\frac{N}{25}$	2·7 2·6	—	—
13	Diabetic coma.	May 4th, 1903.	25·8	—	—	—	—
14	Diabetic coma.	May 4th, 1903.	17·6	$\frac{N}{40}$	—	—	—
15	Diabetes.	May 6th, 1903.	52·0	$\frac{N}{25}$	—	—	—

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[1] Some of our results were brought before the Medical Research Society on Feb 18th last and they are referred to in THE LANCET of March 14th, p. 715, in a paper by Dr. Hale White.

It will be seen from the table that in all the cases of diabetic coma which had not been treated with alkali the quantity of carbon dioxide which could be extracted from the blood was half or less than half the normal. The usual figure given for healthy venous blood is from 40 to 50 volumes per cent. In the blood of the non-comatose patients there was less CO_2 than in normal blood but more than in coma. In this series the depression of the alkalinity of the blood and the diminution in the CO_2 content run approximately parallel except when sodium carbonate or bicarbonate had been given. In the diabetic cases diacetic acid and acetone were present in the urine. The quantity of ammonia is usually regarded as a rough guide to the amount of oxybutyric acid and diacetic acid in the urine, though this assumption is not now without its objections. In two cases direct estimations were made of the oxybutyric acid, acetone, and the ammonia. The proportion of the total nitrogen excreted as NH_3 was high, varying from 12 to 25 per cent. In one case this high proportion was diminished by giving alkali and in another it was not.

The theory has been advanced, and is current to some extent, that in diabetic coma the blood is unable owing to its diminished alkalinity to take up the normal amount of CO_2 and thus that the tissues are overcharged with this gas. We have made four observations upon the tension of CO_2 in the blood of two cases, one of diabetes and one of diabetic coma. We have not found the amount of the gas in the urine of diabetes to be above normal. Complicated physical and chemical points are involved in the interpretation of this result, but it certainly lends no support to the theory that the tissues, in contact with which this urine has been lying, are loaded with an excess of CO_2. We have also passed CO_2 through diabetic blood and urine. In each case the fluid was able to take up a large quantity of the gas and there appears to be no physical disability of the blood to take up more CO_2.

As against the view that the tissues are loaded with CO_2 more favour has been given on the continent to the conception that in diabetes, owing to the acids produced by the morbid metabolism, the cells of the body are (from deprivation of alkali) unable to carry on the usual oxidative processes and that in coma this inability to utilise oxygen becomes acute and the cells, including those of the respiratory centre, are in a state of oxygen starvation, although there is plenty of oxygen in the blood.

From the consideration of the above experiments and from others now in progress we think that in diabetic coma the respiratory symptoms are not entirely to be explained by the assumption of a chemical disability of the blood to combine with carbon dioxide.

SURGICAL EMERGENCIES IN GENERAL PRACTICE.

BY GEORGE A. CLARKSON, F.R.C.S. ENG.

THE two following cases afford good examples of acute abdominal conditions requiring active surgical interference.

CASE 1.—The patient, a man, aged 49 years, was first seen at 2 30 P.M. on Feb. 1st, 1903. He was lying in bed, evidently in considerable pain and with an anxious expression. Asked what was the matter he immediately pointed to a hard semilunar swelling of the size of an orange immediately to the left of the umbilical cicatrix. The history was to the effect that he had not been well for some days, being troubled with aching in the limbs, cough, and wheezing. Not feeling any better that morning he had stayed in bed and about noon, during a violent fit of coughing, he felt a sudden pain and almost immediately noticed the swelling in question. Before this took place the bowels had acted naturally. He had not vomited at all, but he complained of increasing pain in the hernia, which he described as getting harder and harder. An operating table was improvised without delay in an adjoining room and within the space of an hour the operation was begun. The patient was a particularly bad subject for an anæsthetic as, in addition to some bronchial catarrh, his face was very congested from dilated venules, his arteries were thickened and rigid, and some years previously he had suffered from acute rheumatism with cardiac complications. Ether was the anæsthetic given. A free incision was made over the hernia and the sac was rapidly and freely opened. It contained much fluid under considerable tension and a loop of very congested small intestine tightly gripped at the neck of the sac which was quite small. The hernia was quite recent. There were no adhesions and no omental lining to the sac. The stricture was divided in an upward direction, the bowel was reduced, and the sac was stripped up to the ring, ligatured, and cut off. The opening in the rectus muscle was then closed with strong silk and the wound was sewn up. Except for some bronchitis, which was troublesome for the first two days, the patient made an uninterrupted recovery. The stitches were removed on the tenth day and at the end of a fortnight the patient was able to get up.

Two interesting points about the case are: (1) that four hours had intervened between
the time that the sac was op
gut was very congested and
ing had occurred.

CASE 2.—The patient was a well-nourished and healthy-looking boy, aged two years. For some two or three months he had had occasional attacks of abdominal pain believed to be due to flatulence. On the evening of April 2nd, 1903, he was seized with sudden pain in the abdomen which made him scream out and very shortly afterwards he passed a considerable amount of bright blood per rectum unmixed with mucus. When seen shortly after this had occurred the child was quite collapsed, the pulse was rapid, and there were evidently occasional paroxysms of pain. The abdomen was rather distended and rigid so that nothing pointing to the exact condition inside could be made out. The rectum contained a little bright blood and nothing abnormal could be felt in it. On the following morning the child was obviously worse, paroxysms of pain occurred about every quarter of an hour, the pulse was very rapid, and the temperature was subnormal. During the night vomiting had commenced and had continued at short intervals. Nothing further was disclosed by palpation of the abdomen or by rectal examination. The child being obviously very ill indeed an operation was advised. This was carried out in the afternoon under chloroform When the abdominal walls were well relaxed under the influence of the anæsthetic a careful palpation revealed no evidence of intussusception or the presence of any swelling at all. The abdomen was opened below the umbilicus and the distended intestines were received into a warm sterilised towel. There was a little free fluid in the peritoneal cavity. On sweeping the hand under the liver a loop of small intestine was separated and brought out, which disclosed the site of the trouble. At the apex of the loop was a tuberculous ulcer which felt like a ring of cartilage let into the bowel. This had produced a local peritonitis and the loop, having become adherent somewhere under the liver, had produced an acute kink. The adhesions, which had been broken down by the hand in bringing the coil down from its original position, were very evident. There were a few large glands in the mesentery, one being of the size of a small walnut. The intestines were sponged over and returned and the abdominal walls were united in two layers with catgut and silkworm gut. The child made an uneventful recovery. The wound healed by first intention and the bowels, at first relieved by an enema, soon began to act without assistance. Careful feeding, with as much fresh air as possible, is being carried out, and as the next few months will be spent at the seaside there should be a reasonable chance of complete recovery.

Leicester.

CESSATION OF RESPIRATION DURING ANÆSTHESIA; RECOVERY AFTER ONE AND A QUARTER HOURS.

BY DAVID LAMB, M.B., C.M. GLASG.,
ANÆSTHETIST TO THE VICTORIA INFIRMARY, GLASGOW.

ON July 3rd, 1902, a well-built man, aged 26 years, was operated upon by Mr. A. E. Maylard on account of acute inflammatory mischief in the left mastoid region. On this occasion chloroform was the anæsthetic employed and from an anæsthetic point of view the operation was completed without incident. On August 15th the patient was again brought to the anæsthetic room, on this occasion under the care of Mr. J. Grant Andrew,[1] acting for Mr. Maylard, and A.C.E. mixture was given by means of a celluloid modification of Rendle's mask. There was little or no excitement during the induction of anæsthesia and the moment the corneal reflex disappeared the patient was removed to the theatre, transferred to the operating-table, and his head arranged in position for the surgeon. Immediately this was done it was observed that he was apparently "holding his breath," as though during these manipulations he had been allowed to become too lightly under. The lower jaw was pulled forward, the lips were rubbed, and then with a little difficulty on account of the firmly clenched teeth a gag was introduced and tongue forceps applied, but, contrary to expectation, the spasm which affected also the muscles of the neck continued and lividity became rather too evident. The pupils, however, were well contracted but not pinhole; the pulse was steady, full, regular, and certainly not less than 60 per minute; and the corneal reflex was absent. A few turns of artificial respiration were followed by the disappearance of the lividity and respiratory spasm, for the latter being substituted a condition of simple cessation of respiration without other urgent symptom. After about ten minutes of the usual restorative measures (lowering the head over the end of the table, artificial respiration, slapping the chest with cold wet towels, inhalations from a sponge saturated with ether, and administration of oxygen) suspicion began to arise that the condition was due not wholly to the anæsthetic but to some intracranial condition, and the propriety of at once trephining was discussed. There being a little difficulty in keeping the jaw and tongue in position to maintain a free air-way the patient was surcharged with oxygen and a condition analogous to physiological apnœa induced, during which tracheotomy was comfortably performed by Mr. Andrew. No result being produced by the stimulation caused by the direct inhalation of ether vapour and oxygen through the tracheotomy wound it was then decided to proceed with the examination of the temporo-sphenoidal lobe and cerebellum without further delay. Silvester's method of artificial respiration interfering considerably with the surgeon's movements the patient was again surcharged with oxygen by this method and then direct compression and relaxation of the chest (Howard) with continuous administration of oxygen were substituted, thereby greatly assisting the surgeon Cardiac failure and lividity, however, tended to occur more readily when this method was adopted, and the operation had occasionally to be interrupted whilst Silvester's method was resumed for short periods. Strychnine, digitalin, and ether were injected hypodermically to assist the heart which was now showing a tendency to flag. The skull was trephined in two places and the temporo-sphenoidal lobe and cerebellum on the affected side were explored by Mr. Andrew, but unfortunately with a negative result. The only change noticed was the occurrence from five to ten minutes after the completion of the operation of slow lateral rolling movements of the eyeballs similar to those noted by Ferrier as resulting from cerebellar stimulation but also frequently observable during light anæsthesia apart from any head condition. Strong corneal reflex could occasionally be elicited but the pupils remained equal, firmly contracted and fixed, absolute unconsciousness continued, and respiration would not begin. Cardiac action failed considerably, the radial pulse being at times almost imperceptible. It is possible, indeed, that cardiac action at this period was maintained by the intrinsic cardiac ganglia, the higher centres being involved along with the respiratory centres in the medulla oblongata. So strongly had I been impressed by the probable intracranial source of the trouble that up to this time the employment of a battery had not been given a thought. An induction apparatus not being immediately available a 20-cell galvanic battery was obtained, the negative electrode (a small one) being applied to the neck over the region of the phrenic nerve and the positive to the lower intercostal spaces to try to influence the diaphragm. For a minute or two nothing occurred, the negative pole being in all probability inaccurately applied. At this stage, however, we seemed to hit the phrenic nerve and with each re-application of the electrode a distinct spasmodic inspiratory movement took place, accompanied by dilatation of the pupils and a facial grimace, the whole appearance suggesting the final gasps frequently observed immediately preceding death. The arms at the same time became rigid, interfering with the free performance of artificial respiration. After three or four induced inspirations spontaneous respiration began, the patient almost immediately becoming sufficiently conscious to attempt to resist the application of the dressings and the closure of the tracheotomy wound. On the next morning the patient's condition was fairly satisfactory, but 30 hours afterwards, without apparent cause, though after one or two minutes' warning, a similar respiratory spasm occurred, followed by a similar respiratory failure. Treatment, including the use of the faradic current, was maintained for two hours, when death occurred.

Necropsy.—At the post-mortem examination a small collection of pus surrounded by sloughing tissue was found at the anterior portion of the cerebellum.

Looked at from the point of view of the anæsthetist the following points of interest suggest themselves to me.

1. *The anæsthetic.*—Being informed by the nurse in attendance in the anæsthetic room that the patient was a "mastoid case," and as he was quite conscious and presented nothing to attract special attention, I was unaware that any suspicion had been entertained by the surgeon of the probable presence of an intracranial abscess. Otherwise I would have given chloroform in accordance with the advice of authorities on this subject. At the same time the A.C.E. mixture is in my experience in the great majority of cases associated with less excitement and holding of the breath during the period of induction of anæsthesia than is the case with chloroform even when slowly and carefully administered. On this occasion there were practically none of these objectionable effects produced and this, I think, would counteract so far as increased intracranial pressure was concerned any harmful effect caused by its mildly stimulating action on the pulse and respiration. That very little was required to turn the balance was demonstrated by the sequel, for which no distinct exciting cause could be found. On this occasion I understand that the patient, feeling some warning of impending trouble, called his nurse and that when the house surgeon who was immediately sent for saw him there was clearly a spasmodic closure of the upper air passages, evidenced by the presence of lividity and the forcing of air through the previously closed tracheotomy wound. The immediate re-opening of the latter was followed by breathing for a few minutes before the final cessation took place. This would seem to corroborate my opinion that in the first attack, though at first sight the patient seemed to be "coming out," he was not really so, but, as was indicated by the other guides, he was in the stage of light surgical anæsthesia. The respiratory spasm and the spasmodic closure of the jaws (masseteric spasm frequently observed in cerebellar cases) formed the introductory phenomena produced by the intracranial pressure. Whatever part the anæsthetic played in the production of the condition it alone certainly could not account for its maintenance. Possible alterations in the relations of the abscess the result of the somewhat free movement of the patient after he was anæsthetised may also have to be considered in deciding the exciting cause. The abscess from its anatomical position could not possibly exert any direct pressure on the vital centres.

2. *Oxygen* has in my experience proved itself a most valuable remedial agent in serious anæsthetic difficulties and clearly so in this case. Without it after the first half hour the circulation was so feeble and sluggish as even with satisfactorily performed artificial respiration to allow of the onset of dangerous lividity, whilst with Howard's method, so valuable to the surgeon, it was even more necessary.

3. *The recovery.*—In light of the negative result of the exploratory operation and previously to the post-mortem examination one could not but ascribe the credit of the recovery to the use of the battery. With the intermittent application of the electrode over the phrenic nerve not only was there a consequent diaphragmatic inspiration, but the clearly evident action of the ribs and facial grimace resembled more a complete inspiration or gasp, as if resulting as much from the general shock of the application as from the local action on the phrenic nerve. Unfortunately, in the fatal attack this did not occur, so that we must look for another element in the recovery. This I think was the diminished intracranial pressure caused by the gradual drainage of the cerebro-spinal fluid through the trephine openings. The closure of the latter seems to have allowed re-accumulation of the fluid, recurrence of the pressure, and

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[1] Case of Cerebellar Abscess, by J. Grant Andrew, M.B. Glasg., Brit. Med. Jour., May 2nd, 1903.

a second attack during which their re-opening and tapping might have allowed once more a temporary recovery.

Somewhat similar cases, though mentioned by Macewen, Hewitt, and others, being comparatively rare, the total duration of the respiratory failure being exactly one and a quarter hours, I may be pardoned the above details; and this case is, I think, unique in that recovery, temporary at least, took place without the actual evacuation of the abscess. To what extent this happy result may be ascribed to the battery it is difficult to say, but it cannot be wholly dissociated from it, and faradism certainly now holds, in my estimation, a higher place as a remedial agent in anæsthetic difficulties than it had previously done as a result of my reading on the subject.

Glasgow.

NOTE UPON THE USE OF PILOCARPINE IN THE TREATMENT OF PNEUMONIA.

BY E. CURTIN, M.D.R.U.I.

THE pharmacological action of pilocarpine is well known and its striking action as a diaphoretic has led to its use in many conditions where morbid fluid accumulations have to be removed from the system. It does not appear, however, that its therapeutic value has been tested in pneumonia save by few observers. Thus recently[1] Pelzl records his experiences in an Austrian military hospital where he gave 0·0125 gramme (equal to one-fifth of a grain in solution) of pilocarpine hydrochloride by the mouth with good results. In the same article several theories are given of the action of pilocarpine in cases of pneumonia. In the South African war during 1901–02 I made use of the drug in several cases under my care. The notes of some of these cases are given below. The administration was by means of hypodermic injections of one-tenth of a grain of pilocarpine nitrate in solution of tabloids of that strength. I might draw attention to the fact that the disease in coloured races (I speak especially of Kaffirs in these notes) exhibits some differences from that seen in Europeans—e.g., British troops serving in South Africa. In the latter there is more of the toxæmic character than in the former. The high mortality—no less than from 50 to 60 per cent.—in cases of pneumonia occurring in the coloured races of South Africa has been frequently remarked upon.

CASE 1.—A half-caste scout was admitted to hospital complaining of "stick in the side." The whole of his right lung was dull to percussion and his general symptoms pointed to a severe attack of pneumonia. Repeated cold baths failed to affect his temperature which registered 105·4 F. He passed a restless and delirious night and on the following morning, his temperature having risen to 106°, I gave a hypodermic injection of one-tenth of a grain of pilocarpine. Considerable sweating followed and although there was no immediate reduction [illegible] was much relieved. [illegible] the ensuing night he [illegible] bloody mucus and w[illegible] third day of his illness his temperature was normal and his lung had almost completely cleared. Two days subsequently he left the hospital tent at his own request.

CASES 2 and 3.—Soon after this I had occasion to visit Upington where Dr. Phillips showed me two cases of pneumonia in half-castes. In the first case both lungs were affected and th[illegible]onchial secretions whic[illegible]trength to expel by cou[illegible] of distress that Dr. [illegible]as quite hopeless. The [illegible]ent was one of average severity. Both cases were in the same ward and under similar conditions and were injected with one-tenth of a grain of pilocarpine. Their recoveries were rapid and satisfactory.

A transfer to No. 3 Stationary Hospital, De Aar, from Kenhardt, where there was a native ward equipped with competent attendants, afforded me an opportunity of further testing the value of the drug in pneumonia with the result of a decrease in the mortality in native cases of at least 50 per cent.

In the few cases in which I had an opportunity of applying this treatment to Europeans the results were not so satisfactory as in natives. This I attribute, as already stated, to the toxæmic symptoms which were such a marked feature in soldiers affected with pneumonia during active service in South Africa.

CASE 4.—A private, aged 41 years, with the usual soldier's history, was admitted to hospital suffering from pneumonia of the left lower lobe. The temperature on the morning of admission was 104° F., the pulse was 125, thready and compressible, and the respirations were 50, shallow, very painful, and accompanied by working of the nostrils. His appearance was one of great distress. On the second day after his admission his evening temperature was 103°, but his general symptoms continuing severe I gave one-tenth of a grain of pilocarpine hypodermically with the result of almost immediate arrest of pleuritic pain and relief of general distress. During the ensuing night he expectorated freely. The following morning his temperature had fallen to 100° and redux crepitations had replaced the tubular breathing of the previous day. From the fifth to the ninth day his temperature remained below 100° F. and in every respect he was making satisfactory progress. He then had a rigor which was followed by pneumonia of the right lower lobe. He was again injected with pilocarpine and after a prolonged convalescence returned to duty. The usual stimulating treatment was also employed.

CASE 5.—This patient was a private who was admitted in the evening. There was a patch of dulness of about the size of the palm of the hand over the lower anterior border of the right lung. The morning after admission his temperature registered 103·4° F. and in the evening slightly above 104°. His general symptoms were not severe and he was comparatively free from pain. At 2 P.M. on the second day after admission to hospital I injected one-tenth of a grain of pilocarpine which produced moderate perspiration but otherwise had no immediate marked effect. In the evening his temperature went up 1° to 104°. On the following morning it had fallen to normal, where it remained. He returned to duty on the fourteenth day after his admission and would have been fit sooner but for his indiscretion in having attended a concert.

CASE 6.—The patient, a private, was admitted suffering from pneumonia of the left base. On the following day acute delirium set in with symptoms of profound toxæmia. An injection of one-tenth of a grain temporarily relieved his breathing. On the evening of the third day his temperature, which from the first had been under 102° F., rose to 105°. The injection was repeated, with the result of a reduction to 103° but without relief to other symptoms, especially delirium which continued active until his death at midnight. [illegible] were also used. Notable features [illegible] scanty expectoration, compar[illegible] a few hours before death, and delirium.

CASE 7.—The patient, a private, was admitted complaining of cough and pain in his chest. His temperature was 102 4° F., the respirations were 30, and the pulse was 120. The lower lobe of the left lung was dull to percussion and the breathing was tubular. The right lower lobe was also dull. There was a short sharp cough, with scanty blood-stained expectoration. On the following day dulness on the left side extended to within three inches of the apex. The respirations and pulse were very frequent and the heart sounds were feeble. From this time cough and expectoration ceased and active delirium set in. On the third day after admission subcrepitant râles replaced the tubular breathing of the previous evening. Dyspnœa and cyanosis being marked one-tenth of a grain of pilocarpine was given with the view of liquefying and causing absorption of inflammatory products. On the following morning both lungs had cleared remark[illegible] however, continued and [illegible] Toxæmic features [illegible]so and it resembled the pneumonia seen in alcoholics, as after the first 48 hours there was scarcely any cough or expectoration, the fever was never very high, and there was active delirium. In addition to general stimulating treatment two pints of warm saline [illegible]lar tissue of the axilla. [illegible]btained. A feature in [illegible]

The last two cases are instructive in showing that the prognosis in pneumonia does not depend so much on the extent of lung affected as on the amount of toxic symptoms present and the absence of a healthy reaction in the individual attacked. A low range of temperature is not necessarily a favourable sign, especially if accompanied by delirium, scanty expectoration, little cough, and a dry brown tongue.

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[1] THE LANCET, March 21st, 1903, p. 823.

From my limited experience of the action of pilocarpine I believe that it will occupy a leading place in the treatment of pneumonia. It relieves pleuritic pain and breathing within a few hours of its administration and also seems to hasten resolution, probably by exciting glandular secretion. Its administration is in the majority of cases followed by a rise of temperature of from half a degree to one and a half degrees. One-tenth of a grain hypodermically does not cause profuse perspiration but rarely fails to reduce the temperature within an hour or two. It also cleans the tongue and stimulates the flow of saliva. I have not noticed its repeated administration attended by any undesirable or unpleasant results. One precaution is necessary—namely, to keep the patient warm and especially the feet. I regret that owing to the loss of some notes and temperature charts I have to generalise instead of giving full statistics and details of the cases, but I trust that from the above rough notes—jotted down while on active service in South Africa—I have succeeded in drawing attention to a drug which will frequently prove of practical value in cases of pneumonia.

Bournemouth.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

METHYLENE BLUE IN THE TREATMENT OF MALIGNANT MALARIAL FEVER.

BY J. M. ATKINSON, M.B. LOND., M.R.C.S. ENG., D.P.H. CANTAB.,

PRINCIPAL CIVIL MEDICAL OFFICER, HONG KONG.

As is well known, quinine has practically no effect on the crescent bodies met with in malignant malarial fever. It is these bodies which, when ingested into the stomach of the mosquito, undergo those changes which terminate in the formation of the germinal rods or sporozoites. These are carried in the body fluid of the mosquito to its salivary glands and are the actual source of infection in man. Hence the importance of finding some drug that will destroy them. I have recently been trying the effect of the internal administration of methylene blue on a Chinese boy, aged 15 years, who was admitted into the Government Civil Hospital on Jan. 24th, 1903, suffering from malignant malarial fever. On examining his blood numbers of crescents were found and as quinine administered for a week had no effect in diminishing these, on Feb. 9th two grains of methylene blue were given thrice daily in the form of a pill. On the 16th, after careful examination, no crescents were to be found in his blood. As the patient was now suffering from gastric disturbance, nausea, vomiting, &c., which I thought might be due to the drug, it was discontinued. The blood was again examined on the 17th and 20th and was found to be free from crescents.

The above is only one case, I admit, but knowing the importance of reporting the effects of any drug which will kill these crescents I send this note.

Hong Kong.

A CASE OF RUPTURED OVARIAN CYST.

BY ALFRED CLARK, F.R.C.S. EDIN.

ON March 14th, 1903, I was called to see a married woman, aged 25 years, who had been suffering from severe abdominal pain and metrorrhagia at about fortnightly intervals for three or four months. She had one child three and a half years old and had never been pregnant since. I found her in bed, blanched, restless, with sighing respiration, a feeble pulse of 130 per minute, and a temperature of 102° F. Her abdomen was slightly distended, acutely tender, and rather dull on percussion. The left iliac region was a little more full than the right and was more resistant on palpation. With a hypodermic injection of one-fiftieth of a grain of strychnia her pulse improved somewhat and I had her removed at once to a private hospital where at 10 P.M. Dr. T. G. S. Hodson administered chloroform and I opened the abdomen with an incision four and a half inches in length, the patient being in the Trendelenburg position. There was a large quantity of blood clot in the abdominal cavity. After removing this I found an ovarian cyst on the left side about as large as an ostrich's egg with a straight rent in its anterior aspect about three inches in length. Venous oozing was still going on from the edges of the rent. The cyst wall was thick and very adherent to the bladder and small intestines. A piece of cyst wall was so intimately adherent to the latter that I had to leave it lest I should tear the bowel. Then I removed the left ovary and examined the right. This had a thin-walled serous cyst as large as an orange, so I removed this also. The operation lasted about 45 minutes as the adhesions made it tedious and the patient was removed to bed in a bad condition and with a very feeble and fluttering pulse, but she rallied after a hypodermic injection of one-fiftieth of a grain of strychnia. She had rather troublesome vomiting of bright-green material for a couple of days and on the second and third days passed some blood-stained mucus from the bowels. Otherwise she made an uninterrupted recovery. I removed the sutures on the fourteenth day and she was discharged a few days later. A fortnight later she called at my house and said she felt better than she had done for a year or more.

Bitterne, Hants.

A Mirror

OF

HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

SOUTH WIMBLEDON AND MERTON COTTAGE HOSPITAL.

A CASE OF CÆSAREAN SECTION FOR CONTRACTED PELVIS; RECOVERY OF THE MOTHER AND CHILD.

(Under the care of Dr. MARTIN RANDALL and Dr. A. H. GERRARD.)

IN this case, which was one of full-term pregnancy, the patient was a primipara, aged 21 years. The pains commenced slightly on August 24th, 1902. On the 26th the patient was seen by Dr. A. H. Gerrard when he found the waters broken and the head presenting above the brim. He came to the conclusion that the pelvis was greatly contracted and he asked Dr. M. Randall to see the case with him. The patient was a small woman but not obviously malformed. Her general condition was good. The pains were regular and strong, the membranes were ruptured, and the os was of about the size of a five-shilling piece. The head could be felt freely moveable higher up. The sacral promontory was very large and projecting, the diagonal conjugate being under three inches. The estimate on measuring was two and seven-eighths inches; this would indicate a true conjugate of not much over two and a half inches. As the head appeared on abdominal palpation to be of normal size, the alternative of craniotomy or Cæsarean section was put to the patient and her friends and the latter was chosen. The patient was removed to the hospital. Dr. D. Findlay administered ether and Dr. Gerrard and Dr. T. Brice Poole assisted at the operation. A hypodermic injection of one-twenty-fifth of a grain of strychnine was given and the vagina was washed out with a 1 in 1000 solution of biniodide of mercury.

After opening the abdomen a piece of stout elastic tubing was passed behind the uterus to the cervix. This was rendered very easy by a thick copper wire passed along the bore of the tubing; the wire was removed as soon as the rubber was *in situ.* Gauze sheets having been packed round the uterus this was quickly incised and opened, the child was seized by the back and removed, and the cord was clamped and cut. Bleeding was free for a few seconds and then the ligature was tightened. The incision at its upper end just notched the placenta which was situated at the fundus. The placenta and membranes were stripped off and the inside of the uterus was swabbed out with biniodide of mercury lotion. The uterine incision was sutured in two layers. Fishing gut was used for the deep sutures which were passed only through muscle and submucous tissue, the peritoneum and mucous membrane being excluded. The peritoneum was then sewn together by interrupted stitches of fine silk so as to bury the knots of the deep sutures. The uterus was now well contracted and was returned into the abdomen. A piece of one Fallopian tube was excised between ligatures but Dr. Randall regrets to say that the other tube was only ligatured once. The peritoneal cavity was found to be unsoiled, so the abdominal wound was sewn up by silkworm-gut sutures. The recovery of the mother and child was normal, the baby being suckled and the mother being desirous of getting up on the third day.

Remarks by Dr. RANDALL.—I must express my thanks to Dr. Gerrard for his skilful after-treatment of the case and for the opportunity of operating on the patient. The only points to which I would draw attention are the ease with which the wire allows the elastic tube to be passed round the uterus—the idea is not original—and the unorthodox, but successful, method of suturing the uterus.

BRISTOL GENERAL HOSPITAL.

A CASE OF TUBERCULOUS PERICARDITIS NECESSITATING FREQUENT ASPIRATIONS.

(Under the care of Dr. J. ODERY SYMES.)

A YOUTH, aged 19 years, was admitted as a surgical patient to the Bristol General Hospital under the care of Mr. C. A. Morton on Jan. 10th, 1903 There was a small superficial abscess in the anterior axillary line over the fourth rib and this was incised and drained. It did not communicate with the pleura, but an exploring needle which apparently was inserted into the right pleural cavity (with great difficulty owing to the falling in of the chest wall) drew off a little pus. Dr. J. Odery Symes saw the patient in consultation with Mr. Morton on Jan. 11th. The pericardium was tapped and five ounces of blood-stained fluid were withdrawn. The boy was transferred to the medical wards under the care of Dr. Symes on the 12th. With regard to the patient's history, he had had no illness of any sort until a fortnight before Christmas, 1902, when he noticed a swelling rise over the front of the right chest. On Christmas Day there were pains in the left chest and back and these had continued since. There was breathlessness on exertion and the patient had to give up work but had not been confined to bed. Cough was slight and no wasting was noticed. On Jan. 12th the condition was as follows. The patient was a delicate-looking, wasted lad. The right side of the chest was flattened and immobile, the lower ribs having fallen in and lying in contact with one another. The left front was unduly prominent, especially over the præcordium. On the right side there were signs of consolidation of the upper lobe of the lung and of fluid in the pleural cavity below. Over the left lung, back and front, the vesicular murmur was harsh, exaggerated, and bronchial and fine râles were heard; the posterior pericardial patch of dulness and the posterior pericardial patch of tubular breathing and ægophony were well marked. The respirations were 38. There was bulging of the præcordial region and dulness extended above as high as the first rib, to the right one inch from the sternal border and to the left to the anterior axillary fold. The heart sounds were almost inaudible and a rough friction sound occurred with respiration in the third left space in front. The pulse was 120, weak, and irregular in force and frequency. The pulsus paradoxus was at times present. The liver was enlarged, being especially prominent in the epigastric region, where, too, it was thought a mass of thickened omentum could be felt. There were fluid in the peritoneal cavity and a trace of albumin in the urine. In consequence of the re-accumulation of fluid in the pericardium tappings were made on the following dates: on Jan. 16th, six and a half ounces were drawn off; on the 31st, five and a half ounces; on Feb. 13th, seven ounces; and on the 20th, 12 ounces. The spot chosen for the punctures was the fourth left costal interspace close to the edge of the sternum. The fluid was blood-stained, the specific gravity was from 1020 to 1024, it was alkaline, cloudy, and when centrifugalised showed in addition to leucocytes a large number of tubercle bacilli. After each aspiration there yet remained a considerable quantity of fluid in the pericardium and for this reason it would have been better to have attacked the sac by puncture up through the epigastrium and this might have been done with a cannula and trocar as the fluid was under positive pressure. The cardiac failure and dyspnœa were much relieved after each aspiration. The progress of the case does not call for much comment. An unsuccessful attempt was made to draw off the fluid from the right base by means of an aspirator but the space between the ribs did not permit of a needle being passed. The friends refused to have any operation performed necessitating the administration of an anæsthetic. Considerable œdema of the right leg and thigh developed and to a lesser degree the left limb was similarly affected. Brief intervals of delirium were noted and for a few days there were symptoms of an abscess pointing at the base of the right lung in front. The red œdematous swelling, however, subsequently subsided. The temperature was of a hectic type throughout. The urine was scanty and albuminous. The patient's strength gradually failed and he died on March 3rd. The friends refused permission to make a post-mortem examination.

Remarks by Dr. SYMES.—The case was apparently one of primary tuberculosis of the right lung, secondary empyema and collapse of the lung, and tuberculous invasion of the pericardium and peritoneum. It is remarkable that the patient was apparently but little inconvenienced by the pulmonary collapse, which from the condition of the chest wall on admission must have been of old standing. He could give no history of a previous illness and had not been incapacitated from work. The pericardial effusion which [illegible] though [illegible] n walk- [illegible] ould be demonstrated in stained films of the exudate is a striking testimony to the value of the electrical centrifuge as an aid to bacteriological examinations. I have to thank the house physician, Dr. C. C. Shaw, for the notes on the case and for performing the required aspirations.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Differentiation of the Continued and Remittent Fevers of the Tropics by the Blood Changes.

A MEETING of this society was held on May 12th, Mr. ALFRED WILLETT, the President, being in the chair.

Sir DYCE DUCKWORTH, who had represented the society at the International Congress of Medicine in Madrid, gave a short account of the work of the Congress.

Captain LEONARD ROGERS, I.M.S., M.D., read a paper [illegible] Continued and Remittent Fevers [illegible] Changes. The paper dealt with [illegible] f continued and remittent fevers worked out during the last two years in the European and native hospitals in Calcutta with both the serum tests and the differential leucocyte count. The question was discussed as to whether there were any hitherto undifferentiated fevers to be met with, such as were described by Dr. Crombie in his address before the Indian Medical Congress in 1894, which had not previously been put to the test of modern methods of diagnosis. In all the cases the differential leucocyte count had been carried out, as Captain Rogers had shown that by its means very valuable aid could be obtained in differentiating typhoid from malarial remittent fevers, this being of the greatest value in this research on account of the impossibility of finding parasites in most cases of malarial fevers which had been given quinine before they came under observation, as was nearly always the case with European patients. 50 consecutive cases of typhoid fever were first dealt with; a short clinical account based on the analysis of the notes and tables of the results of the serum test and the leucocyte counts were given. The latter bore out Captain Rogers's earlier results in a different and smaller series of cases with regard to the very frequent presence of an increase in the percentage of the lymphocytes in typhoid fever without any increase of the large mononuclear white corpuscles, except during the stages of convalescence or in cases complicated by malaria. The frequency of typhoid fever in natives, as shown by the serum test, was then briefly dealt with, and this confirmed Captain Rogers's former experience on this subject—a point of some importance in view of Dr. Crombie's statements that the disease was very rare in natives of India. In a similar way a series of malarial remittent fevers were dealt with and the great value of the large mononuclear increase in the diagnosis of this class of fevers was illustrated. Further certain clinical features of considerable diagnostic importance based on the records of both series of cases were pointed out, which enabled many cases to be accurately diagnosed without the use of the blood tests. Next, the question of the presence of new fevers, in addition to typhoid fever and malaria, was discussed in relation to Dr. Crombie's classification based on clinical experience, and a chart was given of the cases treated in the European General Hospital during the last three years, showing the seasonal distribution of the different forms of fever, which supported the conclusion of Captain Rogers that there were no new fevers of common occurrence and that the so-called "simple continued fevers" were malarial in nature, while that described by Dr. Crombie under the term "non-malarial remittent" and seen by him nearly exclusively in natives was nothing but typhoid fever. Lastly, some recent observations on the so-called "low fever" were recorded and the nature of this affection was discussed. A series of charts illustrating cases of special interest were shown.

Dr. Patrick Manson said that he differed entirely from the conclusions arrived at by Captain Rogers, which seemed to him to be based on quite inadequate grounds. Dr. Manson pointed out that an increase of the large mononuclear leucocytes occurred not only in malaria but was present also in trypanosomiasis and that the diagnosis of malaria could not rest on that point alone. Captain Rogers's experience was founded on observations of fevers seen in Calcutta and could not be applied to tropical fevers generally, since the type of African fevers differed greatly from the fevers occurring in India. He was certain that there were many varieties of continued fever which were neither malarial nor typhoid. He thought that quinine given by the mouth and absorbed was as effectual as quinine given by hypodermic injection. He considered that Captain Rogers's conclusions were premature and not gathered from a sufficiently large field to justify the statements made.

Dr. A. E. Wright said that he neither approved of the conclusions arrived at by Captain Rogers nor of the method on which those conclusions were based. He pointed out that the large mononuclear cell might be very considerably altered by the pressure of the cover-slip and that it was extremely difficult to fix a definite standard of size. He would like to know what the condition of the blood might be and whether there was an increase of large mononuclear cells in the case of a normal man who was taking large doses of quinine. He pointed out that the greatest number of mononuclear cells was not found in those cases in which the malaria parasite could be demonstrated to be present. He was of the opinion that there were many remittent fevers which had not yet been classified.

Dr. George Low agreed that the increase of the mononuclear leucocytes could not be taken as evidence of malaria but he did not think that there was much difficulty in estimating the number.

Captain Rogers replied.

MEDICAL SOCIETY OF LONDON.

Annual General Meeting.—The Pathology and Treatment of Enlarged Prostate.—Chorea in Pregnancy.—Election of Officers and Council.

The annual general meeting of this society was held on May 11th, Dr. Frederick S. Palmer, one of the Vice-Presidents, being in the chair. The annual reports of the council, the honorary librarian, and the house and finance committees were received and adopted.

An ordinary meeting was then held, Mr. A. Pearce Gould, the President, being in the chair.

Mr. W. Bruce Clarke read a paper entitled "Some Points in the Pathology and Treatment of Enlarged Prostate." Reference was made to a paper by Sir William Thomson[1] on the subject, and preference was expressed for the term "prostatic obstruction" rather than "prostatic enlargement," because in many cases where symptoms arose very little enlargement of the gland was present. Mr. Bruce Clarke contended that prostatic obstruction was the result of several pathological conditions and not of one. Some of these were accompanied by enlargement of the prostate and some were not. After quoting various authorities on this point he described three principal varieties of obstruction—(1) adenoma, (2) fibrous prostate due to sclerosis of gland tissue, and (3) varicosity of the veins of the prostatic urethra and trigone. Each of these demanded different treatment. The adenoma must be shelled out, while for the fibrous prostate, which was very difficult to remove, it was quite sufficient to remove one-half of the gland. This plan of treatment had been very successful in his hands. In the vascular prostate the cause of the obstruction was the blocking of the urethral orifice by the prolapse of the mucous membrane of the trigone which was loosened by the subjacent varicose vessels. A method of cauterisation similar to that which was practised in prolapse of the rectum produced satisfactory results. 33 cases were then related, three of which ended fatally, giving a mortality of 9 per cent.—Mr. Reginald Harrison referred to that form of prostatic obstruction due to carcinoma. He related two cases which he had recently observed and exhibited the prostate glands which had been removed. These and other cases showed how impossible it was to eradicate malignant disease from this situation. The high-frequency current and Roentgen rays were probably preferable as a means of treatment.—Mr. F. Swinford Edwards indorsed the previous speaker's remarks as to the comparative frequency of malignant disease as a cause of prostatic obstruction. Several cases in Mr. Edwards's experience had been due to calculus. In cases of soft vascular prostate double vasectomy was advisable. The cystoscope could be employed in most cases of enlarged prostate and its use should not be omitted. The results of enucleation were admirable when the operation did not terminate fatally, and it was often very successful. The hæmorrhage was only moderate in Mr. Edwards's experience.—Mr. Cuthbert S. Wallace denied that there was in the prostate gland a separate capsule in the same sense that the kidney had a capsule. He submitted that total prostatectomy consisted in reality in the shelling out of large adenomatous masses. In regard to vasectomy it had no effect on the prostate. This had been shown by John Hunter.—Mr. Bruce Clarke, in replying, said that his remarks had reference only to non-malignant cases and he admitted that malignant disease was a common cause.

Dr. Cecil Wall and Dr. H. Russell Andrews made a communication on Chorea in Pregnancy which comprised an analysis of 40 cases occurring in 37 patients. The chorea had occurred in the first pregnancy in 18 cases; in 10 cases the first pregnancy was not attended with chorea but the disease occurred in later pregnancies; in six cases chorea had recurred in subsequent pregnancies. 16 out of the 37 patients had previously suffered from rheumatism in some form. In 11 there were no rheumatic manifestations. As regarded the month of pregnancy in which the movements began the largest number of cases were to be found in the fourth and fifth months. There were two spontaneous abortions, and both of these cases were fatal. There were five fatal cases among the 40. In two of these five abortion was induced and in two others abortion had been spontaneous. The use of bromides or opium was strongly deprecated and arsenic was advocated. Induction of premature labour was not recommended.—Dr. Robert Jones said that his experience was limited to cases of chorea associated with insanity, and he dwelt on the association of mental states with muscular movements. Muscular movements were more often associated with dementia and melancholia.—Dr. F. J. McCann remarked that the movements of a fœtus were of a choreic type. There were many different kinds of chorea. The influence of "quickening" on the determination of an attack of chorea was also referred to. Chloral was advocated for its treatment.—Dr. G. E. Herman remarked that the frequency of spontaneous abortion in pregnancy complicated by chorea was not any greater than in normal pregnancies. He did not advocate the induction of premature labour; it certainly did not cure the disease or improve the prognosis in his experience.—Dr. Amand J. M. Routh remarked that two types of chorea were met with in pregnancy, a severe and a mild type. *Chloroform inhalation was efficient in some cases. As regarded the induction of premature labour,* there was great danger of sepsis in these cases when labour was induced, and from this the patient might die; apart from this danger his belief was that it relieved the chorea; though it was not always advisable by any means, it might be indicated in some cases. —Dr. WALL and Dr. ANDREWS replied, pointing out that the records of such cases showed that when abortion was performed the chorea disappeared in a few weeks, but it was a dangerous method to adopt.

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[1] Brit. Med. Jour., May 31st, 1902.

The report of the scrutineers of the ballot showed that the following gentlemen had been appointed officers and members of the council for the ensuing year:—President, Dr. F. de Havilland Hall. Vice-Presidents: Dr. Frederick S. Palmer, Mr. Henry Morris, Dr. Charles E Beevor, and Mr. Bernard Pitts. Treasurer: Mr. David H. Goodsall. Librarian: Dr. Arthur Francis Voelcker. Honorary Secretaries: Dr. Henry A. Caley and Mr. H. J. Waring. Honorary Secretary for foreign correspondence: Dr. H. D. Rolleston. Council: Mr. Arthur E. Barker, Dr. J. Vincent Bell, Dr. J. Rose Bradford, Dr. J. Walter Carr, Dr. Charles W. Chapman, Mr. F. Richardson Cross, Mr. Frederic Durham, Mr. Frederic S. Eve, Dr. William Ewart, Dr. Robert A. Gibbons, Mr. A. Pearce Gould, Dr. Montague Handfield-Jones, Mr. Jonathan Hutchinson, junior, Mr. Richard Lake, Dr. Marmaduke Prickett, Dr. Arthur H. Robinson, Mr. A. Mayo Robson, Dr. George C. Steele-Perkins, Dr. William J Tyson, and Mr Cuthbert S. Wallace.

CLINICAL SOCIETY OF LONDON.

Hair-ball in the Stomach.—Spinal Meningo-myelocele.—Angioma of Synovial Membrane and Muscle.—Cellulitis of the Round Ligament and Spermatic Cord and its Relation to Strangulated Hernia.

A MEETING of this society was held on May 8th, Mr. HOWARD MARSH, the President, being in the chair.

Mr. C. A. MORTON (Bristol) read a paper on a case of Hair-ball removed from the Stomach. The patient, a young woman, aged 18 years, had a large, hard, and very freely moveable and resonant abdominal swelling which had been noticed for some months. The chief symptoms had been pain and vomiting. The latter occurred mostly after food, but often in the night. No exact diagnosis was possible but the free mobility and resonance suggested an omental mass of tubercle or new growth. The hair-ball weighed 1 pound 12 ounces and measured 6 inches across and was 2½ inches thick. It was removed through a four-inch incision in the stomach and the patient made a good recovery. After operation a history of eating hair and cotton was obtained. References were made to other published cases in which hair-balls had simulated omental growths or fæcal masses in the colon or cystic disease of the spleen and attention was called to the free mobility of abdominal swellings due to hair-balls in the stomach.—Mr. E. P. PATON referred to a similar case under his own care in a child aged nine [illegible] in perfect health, the tumour having

[illegible] notes of a case of Spinal Meningo-myelocele in which *the tumour simulated an abdominal cyst.* He showed the specimen, which was removed from a female child, 11 months old, who displayed various malformations and the abdomen was fuller than natural on the right side, having markedly increased in size during the previous two months. *There was no prominence of the* umbilicus but there was evidently an encysted collection of fluid which, however, did not become tense unless the child strained. Abdominal section was performed and a bluish cyst presented which was tapped, giving vent to about *a pint of clear fluid. The sac was firmly adherent* to the right side of the spine just below the transverse mesocolon. The finger could be passed through it into a hole in the side of the spinal column. It was ligatured and cut away. There was no appearance of nerve structures in the cyst wall. The *fluid had a specific gravity of 1002* and was alkaline, being obviously of cerebro-spinal origin. The child died ten days later. Post mortem extensive abnormalities of the spinal column were found, the defect involving the bony walls of the right side of the last two dorsal vertebræ and *all the lumbar region. The development of the bodies of the* vertebræ was very irregular. There was marked dilatation of the central canal of the cord. With this specimen he showed one from the museum of the Royal College of Surgeons of England (No. 322), exhibiting a similar defect of the vertebræ.—Mr. R. CLEMENT LUCAS remarked that on examining the specimen there appeared to be an absence of the lateral portions of the vertebræ and laminæ on the right side, suggesting that there might have been a projection behind, the fluctuation *of which would have been* communicated to the intra abdominal tumour. He asked whether the brain had been examined and whether any obstruction in the fourth ventricle was noted.—Mr. ROBINSON, in reply, said that there was no projection posteriorly. The brain was examined but no abnormality was noted.

Mr. F. S. EVE read a paper on four cases of Angioma of Synovial Membrane and of Muscle. Case 1 was that of a girl, aged 15 years, who had a swelling on the outer side of the thigh just above the knee, of four years' duration, which was gradually increasing. An exploratory incision was made. The swelling was found to be a diffuse angioma involving the upper part of the synovial membrane of the knee and the vastus externus muscle. It was removed with the affected portion of synovial membrane. A good recovery resulted. Case 2 was that of a boy, aged 10 years, who had a painful swelling which restricted movement occupying the left knee-joint and the inner side of the ligamentum patellæ, causing pain and loss of mobility. A transverse incision was made into the joint and a rounded angioma of synovial membrane, about three-quarters of an inch in diameter, was removed. Case 3 was that of a woman, aged 23 years, who had a painful swelling on the inner side of the elbow which rendered movement difficult. An angioma of [illegible] nal condyle and the [illegible] t of a man, aged 24 [illegible] posterior aspect of [illegible] '-looking growth was removed from the triceps, anconeus, and synovial membrane, which was found to be an angioma. All the cases occurred between the ages of 10 and 25 years. Some of the patients complained of symptoms suggestive of tuberculosis such as pain *increased by movement, and tenderness* and limitation of movement; two showed wasting of muscle and two had "starting" pains. In Cases 2 and 3 the angioma was entirely confined to the synovial membrane. The swelling was usually soft and elastic but pulsation and the emptying of it by pressure were *not observed. No record* of cases of angioma of synovial membrane could be found, but Campbell de Morgan in 1864 and others since had described cases of angioma of muscle.—The PRESIDENT [illegible] cases of precisely the same kind [illegible] *He suggested that the* [illegible] umed and so came to present a close resemblance to active tuberculous disease. He referred to a case at St. Bartholomew's Hospital in which the patient presented a pulsating tumour in the thigh which was thought to be an aneurysm and *was sent in for ligature.* On examination the pulsation was found to be very variable and under an anæsthetic the tumour entirely disappeared. It was probably a cavernous angioma of muscle.—Mr. CLEMENT LUCAS observed that most surgeons were familiar with this condition as met with *in muscle and he referred to* one case in which a very extensive nævoid condition reached *from the thigh a long distance down the leg in a girl.* It took several operations for its complete removal and the synovial membrane was in this case also extensively involved. He urged that in view of *the success of surgical intervention* they should not be afraid to operate in such cases.—Mr. PATON *showed a specimen from a woman, aged 20 years.* She had had an elongated soft swelling on the inner side of the thigh for several years which had increased consequent upon cycling. *The skin over it was normal and on* pressure it could be made almost to disappear. There was neither pulsation nor thrill. It involved, and was limited to, the gracilis muscle in its entirety and the muscle was excised from end to end. He called attention to the size of the vascular spaces.—Mr. ROBINSON recalled a case in which the flexor muscles of the forearm were involved without the skin being affected.—Mr. H. W. PAGE related the case of a man, aged 23 years, who was admitted to St. Mary's Hospital with a markedly pulsating swelling of three or four weeks' *standing in front of the right knee;* it was associated with much pain and rendered him unable to work. The diagnosis was very obscure. The swelling proved to involve the whole of the bursa beneath the patellar ligament and much of the synovial membrane as well as muscle. The magnitude of the operation which the complete removal would have entailed led him to think that amputation of the limb would have been the only course. He was surprised to find that these cases were not so rare as he had believed.—Mr. EVE, in reply, agreed that symptoms might sometimes be due to temporary congestion as in Case 2, but he had never seen any trace of acute inflammation. He said that angioma of muscle alone was not rare and what he wished to point out was that the lesion might involve synovial membranes as well as muscles. In one of his cases the tumour had undergone almost entire metamorphosis into fat.

Mr. E. M. CORNER read a paper on Cellulitis of the Round Ligament and the Spermatic Cord and its relation to Strangulated Hernia. The first case was that of a young married woman who had been confined a year previously. Five days before admission her attention had been drawn to a lump in the left groin which caused pain. The lump increased in size and she vomited irregularly. The case was diagnosed as one of strangulated inguinal epiplocele with perhaps also a partial enterocele. At the operation the end of the round ligament with a lymphatic gland on it was found to be inflamed. The ligament was ligatured above this and the diseased part was removed. Leichtenstein and Hermann had recorded a similar case. From consideration of these two cases it was suggested that the mischief arose in an unhealthy condition of the endometrium following delivery, with consequent lymphadenitis of the gland alongside the distal end of the round ligament which was secondarily affected with cellulitis. This gland was known to be occasionally enlarged in cases of carcinoma of the fundus uteri. A case of cellulitis of the spermatic cord was also related, which occurred in a man, aged 25 years, as the result of a kick. The tumour was accompanied by vomiting and constipation of the bowels. Under treatment with hot lead lotion the swelling subsided. Three years later the testicle on that side was softer and much smaller than the other. These two processes illustrated in woman and in man respectively the fact that cellulitis of the round ligament and the spermatic cord might complicate the diagnosis of strangulated hernia.

OBSTETRICAL SOCIETY OF LONDON.

The Anatomy of the Pregnant Tube.—Exhibition of Specimens —Inversion of the Uterus.

A MEETING of this society was held on May 6th, Dr. EDWARD MALINS, the President, being in the chair.

Dr. H. RUSSELL ANDREWS read a paper on the Anatomy of the Pregnant Tube. He discussed the reasons why accurate knowledge of the minute anatomy of the pregnant tube had been only recently acquired. From a study of the literature of the subject, chiefly that of the last seven years, and from sections made by himself he gave a short description of the histological appearances of the tube and ovum in early tubal pregnancy. The question of tubal decidua was first discussed. In intra-uterine pregnancy decidual changes were not confined to the corporeal endometrium, similar changes being found in the connective tissue cells of the cervical endometrium and ovaries and also in the peritoneal cells. In tubal pregnancy decidual changes were found in the endometrium and in the connective tissue cells of all parts of the tube. A compact decidua, comparable to that formed in the uterus, was not formed in the tube, the difference in the amount of decidua in the two organs depending on differences in their anatomical structure. Dr. Andrews drew attention to the difference in the structure of the mucous membrane of the tubal folds and that of the mucous membrane between the folds. The latest researches on the imbedding of the ovum in the uterus were briefly mentioned and attention was drawn to the fact that the method of imbedding of the ovum in the tube was at first similar to this normal process, but that later the ovum bored its way into the tubal muscle on account of the comparative thinness of the tubal mucous membrane. The fœtal part of the placenta formed in the tube was in every way identical with that formed in the uterus. The maternal part, however, was markedly different in the two organs. A short account was given of the trophoblast as seen in the tube and it was shown that it was exactly like the trophoblast as described by Peters in uterine pregnancy. The danger to life associated with tubal pregnancy was due to the deep situation of the tubal placenta and the comparatively small amount of decidual formation. Abortion and rupture were explained as being results of the penetrating action of the trophoblast. These two accidents were very similar in etiology, the former being an "internal rupture," caused, as was the latter, by the destructive action of the trophoblast. The breach of surface on either the peritoneal or mucous aspect of the tube was brought about either directly by destruction of tissue by the trophoblasts or indirectly by increase of pressure due to bleeding from vessels the walls of which had been destroyed by these fœtal cells. Dr. Andrews came to the following conclusions :—1. That decidual formation did not occur in the tube in the early months of pregnancy to an extent comparable with that seen in the uterus. In many tubes the formation of a compact layer of decidua was anatomically impossible. 2. That the site of the ovum was outside the lumen in the tubal muscle. It seemed impossible to explain this deep site, except as being due to the eroding action of the trophoblast. 3. That the vessels were opened by the trophoblast. 4. That rupture and abortion were mainly brought about by the destructive action of the trophoblast.—Dr. T. W. EDEN said that Dr. Andrews was to be heartily congratulated upon the interesting and important contribution which he had laid before the society. So many points were raised that criticism of the paper was difficult, but he would like to make one or two remarks upon the mode of implantation of the tubal ovum, as described by Dr. Andrews. On reading what Dr. Andrews had to say upon this point he had been struck with the fact that there was remarkably little direct evidence in support of the contention that the ovum was implanted in the muscular layer of the tubal wall. With the exception of the case described by Füth there was practically no evidence at all in support of it ; possibly the specimen shown to the society that evening by Dr. Cuthbert H. J. Lockyer would confirm Füth's conclusions, but at present it was impossible to speak definitely upon the point. On the other hand, it was to be borne in mind that the French school, as represented by Couvelaire and Cornil, entirely contravened Füth's position ; it seemed to him that Dr. Andrews had not done justice to the important work of Couvelaire. His monograph, "Études *Anatomiques sur les Grossesses Tubaires*," was the most important work on the subject which had appeared since Clarence Webster's "Ectopic Pregnancy," yet Dr. Andrews had not made any mention of it in his paper. Couvelaire's view was that the tubal ovum was never completely imbedded in the tubal wall, as the uterine ovum was in the uterine wall, but remained with its outer pole uncovered except by an adventitious layer of fibrin ; this he called the "free pole" of the ovum and described its relations with great minuteness. This decided difference of opinion upon a question of fact between Füth and Couvelaire appeared at first sight to be very perplexing, but it was possible that the explanation was to be found in the fact that Füth's ovum was much younger than any examined by Couvelaire. Their experience in regard to the uterine ovum had taught them that developmental questions could only be solved by the examination of very early specimens ; deductions drawn from appearances found at later stages were very apt to be erroneous. He therefore welcomed the appearance of Dr. Lockyer's specimen which ought to yield important evidence upon this point. Another matter to which Dr. Eden wished to refer was Dr. Andrews's use of the expression that the tubal ovum developed "outside the lumen of the tube." This appeared to him not in any way to add to the accuracy of their conception of tubal pregnancy. Since Peters had shown that the uterine ovum buried itself in the decidua and developed there, it would be equally accurate to speak of the uterine ovum as developing outside the cavity of the uterus, but no one proposed to do so. He thought the point that Dr. Andrews should try to emphasise was that he regarded tubal implantation as intra-muscular and uterine implantation as intra decidual.—Dr. LOCKYER, in connexion with this subject, showed a case of Incomplete Tubal Abortion which demonstrated the mode of implantation of the ovum in the wall of the tube. The specimen illustrated very clearly one of the most important points of Dr Andrews's paper—viz., that the manner in which the impregnated ovum burrowed by means of its trophoblast through the mucosa and into the muscle of the tube-wall, and there developed outside the lumen, was strictly analogous to what normally took place in the uterus, as proved by Peters's specimen of early uterine pregnancy. Peters showed the fallacy of the older ideas regarding the mode of formation of decidua reflexa in which the ovum was regarded as a passive cell which acquired a covering of *decidua by the latter growing up on all sides to inclose it.* Peters proved that the ovum by means of its trophoblast penetrated the endometrium and Dr. Lockyer's specimen proved that the same process took place in the tube when the impregnated ovum lodged in that structure. The value of this specimen lay in the fact that the "capsularis" of the placenta was complete and this, Dr. Lockyer believed, afforded a hitherto unique observation. It negatived the view of Couvelaire that one pole of the ovum remained uncovered by a capsule derived from the wall of the tube. Couvelaire's researches were carried out on material derived from older specimens of tubal pregnancy than the one exhibited by Dr. Lockyer. In the latter the placenta had a diameter of half a centimetre only and although hæmorrhage had taken place in the placental tissues no blood had escaped into the lumen of the tube; consequently the placental capsule which projected into the lumen was uninjured by mechanical pressure and its microscopical structures were easily demonstrated. The sections were illustrated by colour drawings.—Mr. J. H. TARGETT had examined four cases of very early rupture of a gestation sac in the isthmus or narrowest part of the tube. In one of these cases rupture occurred on the seventeenth day after a single coitus (rape). They all showed extensive destruction of the muscular coat by the phagocytic action of the fœtal epithelium and ultimate rupture of the serous membrane. He had also examined a considerable number of ampullary gestations, most of which were tubal moles, and in none of them was there anything at all comparable with a uterine decidua, either beneath or around the ovum. He doubted whether the muscular coat would be penetrated so early in the ampullary gestation as in that of the isthmus, because in the former situation the ovum had much more *room to expand.—Dr. ANDREWS, in reply, thanked the* Fellows for the way in which they had received the paper. He had not had access to Couvelaire's monograph while writing his paper but had read it since. He did not consider that what might be called the German theory of the formation of the "capsularis" was disproved by Couvelaire's description of the membrane covering the "free pole" of the ovum. He had seen serial sections which proved the presence of muscle in the "capsularis." He quite admitted that in the majority of specimens it was impossible to demonstrate a perfect "capsularis," because the majority of specimens were spoilt by bleeding. He considered Dr. Lockyer's specimen an exceedingly interesting one, as showing a thin layer of muscle between the ovum and the lumen of the tube.

Dr. W. H. B. BROOK (Lincoln) showed a Uterus which he had removed by vaginal hysterectomy for primary tuberculosis of the cervix. A microscopical section from the same specimen, showing typical tuberculous structure with giant cells, was also exhibited. The specimen was removed from a married woman, aged 50 years, whose mother and one brother had died from phthisis. Since December last she had suffered from backache and leucorrhœa. On examination in February a circular ulcer with sharply-cut edges and a ragged depressed surface which did not readily bleed was found. A portion of this being excised showed the presence of multi-nucleated tuberculous giant cells. The whole uterus was removed on April 4th, the tubes and ovaries, which appeared healthy, being left. The body of the uterus was not affected nor was there any evidence of tubercle elsewhere. The patient's husband was a strong healthy man.—The case was discussed by Dr. C. J. CULLINGWORTH and Mr. TARGETT.

Dr. W. W. H. TATE showed two specimens of Fibromyoma of the Cervix treated by Abdominal Hysterectomy; Mr. J. S. FAIRBAIRN exhibited a specimen of a Cervical Fibroid which had given rise to severe hæmorrhage; and Dr. A. L. GALABIN brought forward Three Fibroids of the Cervix removed by hysterectomy.—In the discussion which followed Dr H. R. SPENCER, Dr. CULLINGWORTH, Dr. G. F. BLACKER, Mrs. STANLEY BOYD, and Dr. AMAND J. M. ROUTH took part.

Dr H. WILLIAMSON showed a specimen of Embolism of the Pulmonary Artery occurring 24 days after delivery. Eight days after delivery the uterus was explored on account of symptoms of septic infection and a small piece of retained placenta was removed. The patient made a good recovery and she was discharged from hospital 16 days later. On her way home, however, she suddenly became unconscious and died in a few minutes. At the post-mortem examination a large embolus, completely plugging the pulmonary artery, *was found. The right uterine and internal iliac veins were* also thrombosed.

Mr. STANLEY BOYD read a short communication on an unusual case of Inversion of the Uterus.—Dr. ROUTH and Dr. GALABIN took part in the discussion which followed.

OPHTHALMOLOGICAL SOCIETY.

Exhibition of Instruments, Cases, and Specimens.

A CLINICAL meeting of this society was held on May 7th, Mr. W. LANG, the President, being in the chair.

Captain R. H. ELLIOT, I M S., showed Vafiadi's Instrument for detecting Feigned Amblyopia. This instrument was constructed so that when looked into with both eyes open certain objects could be seen with one eye and certain others with the other eye, but it was practically impossible to say with which eye the objects were seen. If a patient who was supposed to have one blind eye described what he could only see with the two eyes together it proved that both possessed vision.—Remarks were made by Mr. W. M. BEAUMONT Mr. W. A. FROST, and the PRESIDENT.

Mr. G. BROOKSBANK JAMES showed a new Portable Perimeter, the chief feature of which was the small and compact compass in which it could be shut up for travelling purposes. It was made by Messrs. Baker of Holborn.

Mr. G HARTRIDGE showed a woman who had Zonular Opacities in both Corneæ. For ten years there had been gradual failure of vision and posterior synechiæ were present in both eyes. Right vision = fingers; left vision = $\frac{6}{60}$ There was no definite specific history although the eyes were inflamed after the birth of her eighth child.—Both Mr. FROST and the PRESIDENT thought that there were probably other degenerative changes at the back of the eye.—Mr. G. HARTRIDGE proposed to try to remove the opacity by scraping.

Mr. G. W. ROLL showed a boy, aged 17 years, who had Microphthalmos with about 20 dioptres of hypermetropia. There were no colobomata of either iris or choroid and the vision right and left was less than $\frac{6}{60}$; with sph. + 15 D. it was $\frac{6}{36}$ with each eye. He had used atropine once but supplemented it with eserine on account of his fear of producing glaucoma.—Mr. FROST had seen a similar case in which glaucoma had been produced by the use of atropine in a patient aged 40 years.

Mr. PERCY FLEMMING and Mr. J. H. PARSONS exhibited Lantern Slides of an Eye which had all the appearance of containing a Glioma; it proved, however, to be one of persistent hyaloid artery with other congenital peculiarities.

Mr. SYDNEY STEPHENSON showed a man, aged 48 years, who had suffered from Gonorrhœa 15 years ago but denied syphilis. He now had several papillomata along the right eyelids and another on the hard palate. They had been removed several times but had recurred. Microscopic sections were shown, but as Mr. Stephenson had not removed them himself he was unable to say if their bases had been cauterised.

Mr. A. S. MORTON described a case of Conical Cornea in a woman whom he first saw in 1880 when she was aged 32 years. Right vision = J. 1 at two inches and left vision = J. 2 at two inches and less than $\frac{6}{60}$ with both eyes but with correction $\frac{6}{24}$. He excised the apex of the left cone at that time and afterwards did the same to the right. In 1881 the right vision with a low + sph. and cyl. = $\frac{6}{6}$ and J. 1 at a good distance and the left vision $\frac{6}{9}$ and J. 1 with sph. + 2. In February, 1901, the vision with both eyes remained at J. 1 at 12 inches and $\frac{6}{9}$, this being 21 and 22 years after the operations in the respective eyes. The scar was barely visible even with a good illumination. He had operated upon about 25 eyes for this disease and proposed shortly to publish his results; some of these he had done with the cautery.—Mr. FROST said that he preferred to use the cautery.—Mr. S. JOHNSON TAYLOR asked if the piece was always cut vertically.—The PRESIDENT thought that a vast number could be greatly improved with high convex cylinders without operation.—Mr. H. E. JULER thought that Mr. Morton's case was a marvellously good one. He himself preferred to use the cautery and to puncture.—Mr. MORTON, in reply, said that he always excised a vertical portion and one case in which he had used the cautery gave him the greatest anxiety although the patient eventually made a good recovery. When he used this method he much preferred to puncture.

A Contribution to the Study of Rheumatic Iritis.—Two Cases of Tuberculous Choroiditis.—Report of Five Cases of Glaucoma in which Adrenalin caused an Increase of Tension.—Proptosis with Deformity of the Head.

An ordinary meeting was held on May 8th, Mr. LANG, the President, being in the chair.

Dr. A. PAINE and Dr. F. J. POYNTON communicated a paper illustrated by lantern slides in which they endeavoured to establish the identity of the pathological changes in Rheumatic Iritis with those occurring in other accepted rheumatic affections. The diplococcus of rheumatism developing in the tissues and cells rather than in the fluid exudate rendered the identification of micro-organisms in fluids obtained by paracentesis of the anterior chamber unsatisfactory, while the opportunities of examining the iris itself in the acute phase of inflammation in the human subject did not often occur. The specimens, therefore, of iris exhibited, which showed the diplococci *in situ*, had been produced experimentally in rabbits. The distribution of the organisms was similar to that occurring in the synovial membranes, showing dense clumps.—Observations were made by the PRESIDENT, Mr. HARTRIDGE, and Mr. W. T. HOLMES SPICER in regard to the extreme rarity of iritis as a complication of true acute rheumatism and the probability that most cases of so-called rheumatic iritis had really their origin in gonorrhœa.—Dr. POYNTON, in reply, said that the demonstration of the special micro-organisms when present required nothing beyond the ordinary methods of preparation and staining. He was not sanguine about finding them in portions of iris removed in the quiescent period, as the subsidence of active inflammation was dependent on their destruction or reduction to a state of latency.

Mr. W. H. H. JESSOP described two cases of Tuberculous Choroiditis, one associated with Conjunctival Tubercle. The first case, that of a girl, aged nine years, was seen on Oct. 29th, 1901, when complaint was made of a burning sensation in the right eye associated with periodical attacks of inflammation and prominence of the lower lid. Later there developed a smooth, round, non-fluctuating swelling in the outer part of the conjunctiva which nearly reached the limbus of the cornea with enlargement of glands in the neck. In the right eye tension was – 1 and vision was $\frac{6}{60}$. There were two areas of detachment of the retina corresponding with two masses obscuring the disc. The external growth was incised and proved to be tubercle by inoculation experiments, characteristic bacilli being obtained. When seen again on Jan. 30th, 1902, vision was $\frac{6}{18}$; the masses in the fundus had practically disappeared, leaving patches resembling albuminuric retinitis, without either pigment, new vessels, or vitreous opacities. The second case was that of a woman, aged 23 years, who complained of misty vision and of a black spot in the field; the vision was $\frac{6}{18}$. A cyst in the breast was found to contain tubercle bacilli and there was a strong family history of tubercle. While under observation masses in the choroid similar to those described in Case 1 were seen to spread from the centre towards the periphery of the fundus, leaving but little trace behind them, and now after three years and four months the patient had recovered with good vision. Reference was made to 42 cases collected and described by Dr. George Carpenter and Mr. Sydney Stephenson.—Mr. STEPHENSON said that tubercle of the choroid, like some other conditions regarded as rare, ceased to be so when systematically looked for. Among 119 cases of tuberculosis which he had examined in surgical wards he had found 11 instances of affection of the choroid; further investigation had disclosed others but had not disturbed the proportion of about 10 per cent. in which the choroid was involved. He indorsed Mr. Jessop's observation as to the absence of residual pigment and vitreous opacities.—Mr. JULER inquired whether these cases had been treated by subconjunctival injection, as one case was on record in which the patient had recovered under local treatment alone.—Mr. JOHNSON TAYLOR asked if the open-air treatment was of use in such cases and suggested that the appearances described suggested to him congenital syphilis.—Mr. HOLMES SPICER said he had regarded tubercle of the choroid as very rare, whereas syphilitic changes in the choroid were comparatively common, and asked how they could with certainty be distinguished.—Mr. STEPHENSON said that of the cases he had collected 50 per cent. had been confirmed as tubercle, both pathologically and bacteriologically. The history was an important factor in the diagnosis, but in tubercle the lesion was solitary and centrally situated, while in syphilis it was multiple and peripheral in distribution.—Mr. JESSOP insisted on the importance of there being no residual pigmentation; he thought that the combination of tubercle with congenital syphilis was very common. In regard to treatment he had adopted little besides "the air at Margate."

Mr. A. F. MACCALLAN reported five cases of Glaucoma in which Adrenalin caused an Increase of Tension. The subject was of interest in connexion with the extended use of this drug in ophthalmic operations. In Case 1 the patient was a woman who had been treated by free instillation of eserine in both eyes. Tension in the right eye was normal; in the left it was + 1. After the use of adrenalin and eserine together there were headache and vomiting and tension in the left eye was + 3. In Case 2 a man suffering from acute glaucoma had a tension of + 2 in the left eye and + 1 in the right eye. Adrenalin and cocaine were applied before operation and the tension in the right eye rose to + 2. In Case 3 a woman suffering from acute glaucoma in the right eye, after the use of eserine presented a tension of + 1; the addition of two drops of adrenalin solution raised it to + 2. In Case 4 the patient was a man with increased tension who after the use of adrenalin presented symptoms of glaucoma, the tension being raised to + 2. After operation the vision was $\frac{6}{9}$ in each eye. In Case 5 a woman with acute glaucoma improved under eserine, the tension being + 2. Adrenalin was applied before operation with the result that tension was raised to + 3 and hæmorrhage occurred. An increase of tension was not the invariable consequence of the use of adrenalin, but it was common in cases of acute and subacute glaucoma, and in two such retinal hæmorrhage had occurred in the experience of Mr. MacCallan. Other cases in which adrenalin had been used showed no change in tension or in the fundus, but the vascular constriction produced by adrenalin appeared to prevent the absorption of other drugs such as those employed to contract the pupil.—Mr. N. BISHOP HARMAN mentioned the use of adrenalin solution in a case of episcleritis. The vision was reduced to $\frac{6}{36}$ and J. 8 with diminution of the colour fields. Improvement occurred after a week, the patient having discontinued the drug himself on account of the stinging pain which it caused.—Mr. JESSOP spoke of the pain and increased tension produced by the use of adrenalin in scleritis and episcleritis; he found that engorgement followed constriction of the vessels.—Mr. PARSONS thought that the effects of adrenalin in diseases of the eye were by no means uniform. Complications following its use were probably due to dilatation of collateral or deep-seated vessels and reactionary dilatation of the superficial ones after the initial contraction had subsided.—Mr. HOLMES SPICER thought that when the arteries were rigid the drug probably caused contraction of the veins.—Mr. JOHNSON TAYLOR considered adrenalin to be useful in limiting hæmorrhage if not otherwise dangerous; since using it he had observed no hæmorrhage in cataract extractions.

Dr. E. DONALDSON communicated a case of Proptosis and Deformity of the Head in a Male Child, two and a half years old, who was the youngest of three. There was nothing in the family history; the labour had been tedious but at full time and no instruments were used. The proptosis was present at birth to much the same extent as now. Half-a-dozen times the right eye had become dislocated forwards outside the lids. The child was in fair health except for slight rickets, the mother having continued to suckle him up to the present time, and he could walk well. He was 2 feet 8 inches high and there was no defect in other special senses or intelligence. The forehead was prominent in the mid-line and depressed on either side. The margin of the lids only just reached the limbus of the cornea in the primary position; in all movements of the eyes the sclerotic was exposed above and below. There was slight horizontal nystagmus; the eyes could be closed and the corneæ were covered during sleep. Movements were free with a tendency to diverge, particularly in the right eye; there was no pulsation and the globes could not be pressed back. So far as could be made out with the finger there was no deformity of the orbital plate. The anterior fontanelle was closed. The vision was defective, the optic discs being pale, but there were no corneal opacities. The case appeared similar to one shown by Mr. H. Power and recorded in the Transactions of the society, vol. xiv., p. 212, the shallowness of the orbits being due to premature synostosis as pointed out by Mr. H. R. Swanzy in vol. xviii., p. 15

Mr. R. W. Doyne showed a card specimen of Multiple Deformities of the Eye and Eyelids.

LIVERPOOL MEDICAL INSTITUTION.

Intestinal Obstruction caused by Bands—Somnoform—Therapeutic Applications of Chloretone.—Influence of the Semi-circular Canals and Labyrinth upon the Movements of the Eyes and Head.

A MEETING of this society was held on April 30th, Mr. Rushton Parker, the President, being in the chair.

Mr. G. P. Newbolt read notes of two cases of Intestinal Obstruction caused by Bands and successfully operated upon. In one, a woman, aged 31 years, there was a recurrence of the condition six months later, when a second successful operation was done at Damascus. In the other case, that of a woman, aged sixty years, two operations had been already performed for strangulated umbilical hernia and the third obstruction was due to a thick omental band under which a coil of intestine had slipped.—The President mentioned the importance of treating intestinal obstruction by starvation and opium. He quoted a case in which this line of treatment was successful. A recurrence took place and operation was necessary as the symptoms did not yield to treatment.

Mr. F. W. Bailey read a note on Somnoform, describing its composition and alleged advantages Its physiological action on respiration, circulation, and the nervous system was also discussed and a description of the mask and method of administration was given. Mr Bailey alluded to the difficulty of knowing when anæsthesia was complete. In his opinion the development of a full and bounding pulse was the sign most to be relied on. No bad effects, he said, were noticed after single administrations, but after repeated doses he had met with violent headache and in one case there was collapse.—Mr. W. Fingland thought that whatever could be done by somnoform could be better and more safely done with nitrous oxide.—Dr. F. E Marshall said that the chief objections to somnoform were its uncertainty of action and its disagreeable taste. It was easy to carry about He, too, had noticed extreme throbbing headache which came on several hours after administration. He thought Bauer's or Ormsby's ether inhaler preferable to the handkerchief mask usually employed.—Mr. E M Stockdale, Mr. C. H. B. Shears, and the President spoke and Mr. Bailey replied

Dr. D. M. Hutton read a short communication upon Some Therapeutic Applications of Chloretone. He had found the drug of great service in the vomiting of pregnancy, menstrual sickness, and sea-sickness. As a hypnotic and [illegible] stomach he could not [illegible] W. Macfie Campbell, [illegible] Warrington, and Dr. R. W. MacKenna also spoke and Dr. Hutton replied

Dr. Edgar Stevenson read a paper on the Influence of the Semi-circular Canals and Labyrinth upon the Movements of the Eyes and Head. He rapidly reviewed the anatomy and nervous connexions of the canals and alluded to experiments on the subject made by himself and others He suggested that they were the end organs of the seventh sense—that of orientation, and further that muscle tone was maintained by the integrity of the canals. The paper was illustrated by lantern slides and by the gyrations of some Japanese dancing mice.—Dr. K. A. Grossmann said that vertigo was not exclusively due to auricular causes or to a continuation of inertia after movement, for some forms were exclusively ocular—Dr. Warrington, Dr F. A. Gill, and Dr. Edgar A. Browne spoke and Dr. Stevenson replied.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Lipæmia in Diabetes Mellitus.—Clinical and Experimental Observations upon General Paralysis.

THE eighth ordinary meeting of this society was held on May 6th, Sir T. R. Fraser, F.R.S, the President, being in the chair.

Before proceeding to the general business of the evening Sir William Turner, K.C.B, LL.D., Principal of the University of Edinburgh, was elected an honorary member, and Professor Fritz Strassmann of Berlin a corresponding member, of the society.

Dr. D. Chalmers Watson showed a case of Keratosis Pilaris (with photographs to illustrate treatment). Dr. Watson also gave a microscopical demonstration on the histo-pathology of the disease.

Mr. David Wallace, C.M.G., *showed a Patient after* Injection of the Nose with Paraffin (with photographs).

Dr. Norman Walker showed two cases of Lupus Erythematosus.

Dr. W. H Miller exhibited a case of Hypertrophy of the Breasts in a girl.

Mr. H. Alexis Thomson showed a patient after High Excision of the Rectum for Carcinoma with Preservation of the Sphincters and Complete Control.

Mr. Charles W. Cathcart showed (1) a patient after *Kocher's Operation of Gastro-duodenostomy for Pyloric* Obstruction; and (2) a patient after Compound Fracture of the Femur caused by two wheels of a loaded goods wagon passing over the thigh.

Mr. Cathcart also showed a Three-way Stop-cock for use in washing out the stomach or bladder.

Mr. Wallace showed a skiagram of a Dart in the Orbital Cavity.

Mr. A. Miles showed (1) Intestine from a case of Hernia into the Duodeno-jejunal Fossa; and (2) Foreign Bodies *from cases of Ano-rectal Fistulæ*

Dr Watson showed Photographs of a Dog affected with Disease of the Thyroid Gland associated with marked Obesity.

Dr. F. D Boyd, C.M.G, gave a demonstration of Bancroft and Haldane's Apparatus for estimating Oxygen and Carbonic Acid in Small Quantities.

The President communicated a paper on Lipæmia in Diabetes Mellitus. He stated that he had brought the case before the society on account of the interest and rarity of the *disease and because of the complete demonstration that was* obtained post mortem of the existence of a large quantity of fat in the blood as well as of its presence during the life of the patient. The case was that of a youth, aged 17 years, who was admitted to the Edinburgh Royal Infirmary in May, 1902, suffering from the ordinary symptoms of diabetes mellitus The patient had been in comfortable circumstances, was well fed, with no alcoholic tendency, and with a good family history. His work did not unduly expose him, as he usually worked under an open shed. *He had enjoyed* good health *until* 12 weeks *previous* to his admission, when he began to complain of great thirst, polyuria, and loss of weight. He was then seen by Dr. J. Macdonald of Carlisle who put him on a strict diet, together with morphine and under this treatment his condition improved somewhat. On admission the patient exhibited a fair amount of muscularity; his temperature was subnormal and remained so during the whole course of his illness. His breath had the acetone odour; the appetite was not voracious; the bowels were regular and occasionally moved twice in the day; the motions were well formed and of a good colour. There was no tenderness over the abdomen or pancreas and the liver and spleen were of normal size The respiratory and circulatory systems were healthy, the pulse was slow and of low tension, there was no evidence of neuritis, and the fundus oculi was normal. As regards the urine, glucose, acetone, and diacetic acid were present. On admission he was placed on ordinary diet for some days, from May 19th to June 3rd. On June 4th diabetic diet was commenced and on the 20th 20 grains of phosphate of sodium were given twice daily and this really constituted the whole treatment The body-weight remained *fairly* constant throughout, there being *only* a *loss of a few* pounds. Under dietetic treatment there was a decided reduction in the amount of urine and sugar excreted and this was further reduced by the phosphate of sodium The patient began to feel much better and spoke of going home at the end of June. The acetone smell in the breath continued however A faint albuminous cloud appeared later in the urine and on July 5th this became more pronounced and hyaline and granular casts *were found to be present. Soon* after admission the patient drank about 10 *pints* of liquid daily and excreted 351 ounces of urine, 10,000 grains of glucose, and 975 grains of urea. Under dietetic treatment he drank about 12 pints daily and excreted 245 ounces of urine, 6847 grains of glucose, and urea in about the former amount. These figures underwent a further reduction during the succeeding week. From June 18th to 24th when taking phosphate of sodium the patient drank daily eight and a half pints and excreted 181 ounces of urine, 5000 grains of glucose, and 840 grains of urea. These figures were still further reduced during the succeeding weeks or until July 5th. On the afternoon of this day, however, he complained of feeling drowsy and generally of feeling unwell and contrary to custom remained in bed all the afternoon. At 7.30 P.M. the drowsy feeling passed off. On the 6th at 8.30 A.M. he was again drowsy; the lips were cyanosed; the pulse was very rapid (166 per minute), small, and feeble (previously his pulse had been about 76); and the respirations were deep and sighing. He gradually passed into a semi-comatose condition. At 9 P.M. phosphate of sodium solution was injected. At 10.30 A.M. on the 7th the face and the surface of the body generally showed a purplish-blue mottling, respiration was very difficult, pain could be elicited on pressing over the region of the stomach, and he moved the head from side to side. The fundus of the eye when examined showed the retinal vessels as pale streaks At 4 P.M. the pulse was 160 and much weaker and irregular. A cardiac stimulant was injected with temporary improvement. Examination of the blood at this time showed that the red corpuscles were slightly "cloudy" in appearance and ran irregularly together without forming rouleaux. In the plasma an immense number of fine granules were present as well as clear highly refractile droplets which were half the diameter of the red cells. The specific gravity was 1036, the hæmocytes were 4,500,000, and the leucocytes were 23,800 per cubic millimetre. The hæmoglobin could not be estimated, as on mixing the blood with water it formed a semi-opaque liquid. On staining with osmic acid an immense number of fat droplets were demonstrated. At 9.30 P.M. a solution of carbonate of sodium together with strophanthin was injected and this was repeated every two hours subsequently. On the 8th the patient was completely comatose. Dr. G. A. Berry examined the eyes and found a peculiar and striking condition—namely, that the retinal vessels were white in colour, due to a change in either their contents or walls. The head was thrown back, the mouth was open, and the tongue was protruded. He died shortly after this. At the post-mortem examination all the serous cavities contained a large quantity of milky fluid. The blood which had escaped from the blood-vessels had a dirty-pink colour and the exposed blood-vessels, as on the surface of the brain, were white or reddish-white in colour along considerable distances of their course, as if they had been injected with wax. This condition was very markedly seen in the retinal vessels and when pressure was applied to them this white part moved along from place to place. The internal organs generally were healthy. There was a moderate amount of fatty degeneration of the liver which was most distinct at the periphery of the lobules. The hepatic capillaries were filled with this fatty matter when seen under the microscope. There were some congestion of the lungs and kidneys and great hyperæmia of the cardiac end of the stomach which contained some fatty-looking matter. The blood at first had a homogeneous dirty-pink colour. After standing in a vessel, however, it separated into two layers, a dark part below and a pale cream-coloured layer above, both nearly equal in amount. The liquid present in the pleural cavities (which was apparently an effusion) gave when it had coagulated even a larger proportion of the white material than did the blood. The President then showed lantern slides of the blood taken before the death of the patient in which it was seen that the granular matter was in reality due to particles of fat. A section of the lung showed that fatty particles filled the blood-vessels. In the liver and kidneys fat was also seen in capillaries. Nearly all of the internal organs exhibited great congestion, but it was the blood throughout all parts of the body which had undergone the most profound change. It contained an enormous quantity of fat in the form of minute granules. When subjected to quantitative analysis the fat present in the blood amounted to 16·5 per cent. as contrasted with from 0·2 to 0·5 per cent. in healthy blood. In ordinary cases of diabetes mellitus the proportion of fat in the blood was almost similar to that found in health. In a former case of diabetic lipæmia which the President had described in 1882, and in which he had determined during life the presence of a great mass of fat in the blood, the fat was present in the amount of 12·6 per cent. In other recorded cases it had varied from 1·3 to 11·7 per cent In the pleural effusion in the case now described the fat was in even larger quantity than in the blood, as it amounted to 20 per cent. The President briefly ran over the literature of the subject, stating that a Dr. Mariet of Edinburgh had noticed excess of fat in diabetics as early as 1799 In 1879 Professor Sanders and Dr. Hamilton had carefully recorded such a case and advanced the opinion that the coma and dyspnœa of so-called "acetonæmia" were due to fat embolism in the pulmonary vessels. This theory was not accepted at present, as there were many cases of diabetic coma without lipæmia. It did not appear that the presence of fat in the blood definitely modified the ordinary symptoms of diabetic coma. The particles of fat were so fine that they could transude into any of the cavities and at the body temperature they were perfectly liquid and so could not be concerned in the production of embolism. Lipæmia must be regarded as an accidental circumstance in the course of diabetic coma. In all probability the diabetic coma was itself due to the presence of acid bodies in the blood, being really an acid intoxication in which β-oxybutyric acid was the most potent factor. A coma indistinguishable from diabetic coma could be induced in animals by injecting this acid into their bodies or by a reduction in the alkalinity of their blood. From 100 to 200 grammes of this acid could be recovered from the body of a person who had died from diabetic coma. The alkalinity of the blood was reduced in the case just described *before* the onset of the symptoms. As regards the origin of the fat, it was not a manifestation of a general fatty degeneration. Moderate fatty change was present only in the liver, kidney, and myocardium. Yet fat was abundantly present throughout the whole vascular system. It could not therefore have been derived from the blood or tissues. Coincidently with the appearance of coma there was a marked reduction in the excretion of sugar. The urine obtained post mortem contained 2·5 grains per ounce. The abrupt fall in the sugar could not have depended on any alteration in the kidney. On July 5th and 6th the sugar had begun to undergo extreme chemical changes leading to a greatly enhanced production of butyric acid as well as to an enormous production of fat. The blood post mortem contained no sugar (neither did that of the case described in 1882). There was strong evidence that in diabetes the sugar in the blood might abruptly undergo chemical changes into acids and occasionally into fat also. As regards treatment both acetonæmia and lipæmia might be recovered from. If the fatty transformation as well as the acetonæmia was due to an acidosis then alkaline treatment was indicated. In this case, perhaps, an insufficient amount was injected or else so much fat and acid had been elaborated that no treatment could have sufficed. The President indicated that this alkaline treatment should be given in large amounts and on the earliest sign of the presence of oxybutyric acid and fat. The presence of the first could be gathered from an examination of the urine and of the second by the blood. The urine and blood should, he thought, be examined in diabetic cases every one or two weeks for β-oxybutyric acid and excess of fat respectively. A young diabetic patient might at any moment pass unexpectedly into a condition of the most serious danger.

Dr. LEWIS C. BRUCE read a paper entitled "Clinical and Experimental Observations upon General Paralysis." He said that in his previous communication to the society his conclusions were (1) that general paralysis was a disease directly due to poisoning by the toxins of bacteria the point of attack of which was through the gastric and intestinal mucous membrane; (2) that the poisoning was probably a mixed one, but the bacillus coli communis was apparently one of the noxious organisms; and (3) that the result of treatment by means of serum taken from cases of general paralysis in a condition of remission and injected subcutaneously into early progressive cases pointed to the fact that some form of serum treatment was the proper treatment for this as yet incurable disease. Further observations had led him to modify conclusion No. 2, that the bacillus coli communis was a cause of the disease. He now believed that bacillus coli infection was a secondary one. In the Perth District Asylum recent acute cases of general paralysis were rarely admitted and so the material for observation was therefore limited. Since the commencement of these observations Dr. Bruce had treated in all eight general paralytics with serum derived from cases of general paralysis in a state of remission. Three of these patients had made apparently complete recoveries. The patient in Case 1 had been discharged for three years and earned his livelihood as a saddler; the patient in Case 2 had been discharged for 18 months and was working in the Post Office; and the patient in Case 3 had been discharged for nine months and worked as a dyer. Of the remaining five patients one was relieved and had shown no progressive symptoms for four years. The remaining four were not improved. The leucocytes were regularly examined in two of the patients who recovered and in all the patients who did not improve. The only change noted was a continuous hyperleucocytosis during the period when the serum was being administered subcutaneously in two cubic centimetre doses daily. In the patients who recovered the leucocytosis fell to below 10,000 per cubic millimetre of blood and the percentage of polymorphonuclear cells was generally below 50. As according to his previous observations the blood of 70 per cent. of general paralytic patients contained an anti-body which agglutinated the bacillus coli communis in low dilutions of 1 in 10, he treated two cases with anti-bacillus coli serum. Neither patient benefited by the treatment. The leucocytosis induced by the subcutaneous injection of antibacillus coli serum was often very high, running to 40,000 per cubic millimetre of blood. Dr. Bruce next investigated the leucocyte changes which occurred in the various stages of the disease. In his first series of observations he had already recorded that in patients suffering from general paralysis there was a recurrent hyperleucocytosis. In a second series of observations made on six cases the fact of a recurrent leucocytosis was confirmed. Stained films showed that in the first stage of the disease the polymorphonuclear leucocytes were generally present in a percentage of 70 or 80. As the disease advanced these cells diminished in number until in the third stage of the disease they might fall as low as 40 per cent. As the polymorphonuclear cells decreased the lymphocytes increased. An eosinophilia was invariably present at some time during the course of the disease and varied from 15 to 5 per cent. of the total number of leucocytes. This eosinophilia was a sign that the disease was active; it was not present in patients who had passed into a definite remission or who had recovered. It was a fact that the course of general paralysis was often temporarily arrested if the patient suffered from some intercurrent inflammatory condition such as erysipelas. To ascertain if this arrest of the disease were due to the leucocytosis induced by the inflammation or to the specific anti-bodies formed in the blood and tissues Dr. Bruce made the following observations. Three cases of general paralysis, all with acute symptoms, were treated with small doses of streptococcus pyogenes toxin. The organism was grown on nutrient broth for a week at a temperature of 37° C. The culture was then killed by heat. This was then tested on rabbits to ascertain its virulence. Each patient then received half cubic centimetre doses of the fluid subcutaneously. Case 1, a male, showed no reaction in temperature, pulse, or leucocytosis and there was no mental benefit. Cases 2 and 3 both gave a mild febrile reaction (99° and 99 8° F. respectively) The pulse in both rose to 100; slight leucocytosis was present (14,000 and 15,000 per cubic millimetre). The polymorphonuclear cells rose above 80 per cent. and the eosinophiles fell to 1 and 2 per cent. The most marked result, however, was the mental effect. Both patients became quiet and sensible, recognised that they were ill, and submitted to treatment. The effect of the first injection passed off in a week, when it was noted that the percentage of eosinophiles was again increasing in the blood. A second and third injection gave exactly similar results and then the patients evidently became immune as further treatment yielded no result. After a due interval the toxins of the staphylococcus aureus prepared in the same way were injected but the subsequent reaction was feeble and gave no definite results. The fact that in Case 1, where there was no hyperleucocytosis, there was no beneficial action and that in Cases 2 and 3, with a hyperleucocytosis with high polymorphonuclear percentage, there was distinct benefit would seem to indicate that the increased polymorphonuclear leucocytosis was the active agent in assisting recovery. The fact of the rapid reaction to the toxins injected and the immunity quickly produced as well as the failure in reaction of the staphylococcus aureus would point to the fact that the toxins of the streptococcus had produced some anti-body in the blood and tissues which temporarily raised the resisting power of the patients. To ascertain if the increased leucocytosis alone were capable of arresting the disease, Dr. Bruce took Case 1 of the previous series, in which the patient had not benefited by serum treatment and observed the leucocytes, temperature, and pulse for several days. Two cubic centimetres of terebene were then introduced subcutaneously but with hardly any reaction and without benefit to her mental or physical condition. In the case of a male patient the reaction was marked; the leucocytes went up to 29,000 per cubic millimetre of blood; the polymorphonuclear cells were 80 per cent. There was great physical and mental benefit. In two months he was discharged to his friends. Two cases were treated with antistreptococcic injections of two cubic centimetres daily for over a month and both benefited temporarily but relapsed on discontinuance of the treatment. Dr. Bruce thought that the benefit was largely due to the leucocytosis induced. The results of these observations were, he thought, evidence against the theory that general paralysis was a disease due primarily to the breaking down of the brain neurons as the result of syphilitic poisoning and they supported the more recent view that the disease was due to the direct action of bacterial toxin which when temporarily overpowered allowed nature to put into force the constant attempts at recovery which were so marked a feature of the disease. Syphilis, plumbism, and great mental or physical strain were undoubtedly the predisposing factors, but without the direct bacterial attack there would be no such disease as general paralysis.—The discussion which followed this paper was brisk and in it the PRESIDENT, Dr. T. H. CLOUSTON, and Dr. W. FORD ROBERTSON took part.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Exhibition of Specimens.—Gynæcological Report of the Rotunda Hospital for the Year 1901–02.

A MEETING of this section was held on April 24th.

Dr W. J. SMYLY exhibited the following card specimens: 1. Two Myomatous Uteri weighing 9 pounds. The first was removed because of its size and continued growth and the second for pain and pressure on the rectum. 2. A Uterus which was removed for Cancer of the Cervix. 3. Tubes removed for Tuberculous Disease.

Dr. SMYLY also showed the following specimens: 1. Ovarian Papillomata. The patient was first seen on Oct 18th, 1902. The tumours, which were confounded with the uterus, on bimanual examination were supposed to be myomata. When seen on the 28th the abdomen was very much distended with ascitic fluid and the patient was suffering intense pain. Abdominal cœliotomy was performed on Oct. 31st. The abdominal peritoneum was studded with secondary growths and the omentum was a mass of disease. The two cystic ovaries, which were universally adherent, were removed with much difficulty and also the omentum. The patient recovered. 2. The patient from whom the specimen was removed was first seen in February, 1901. Though she had long passed the menopause a sanguineous discharge from the uterus had been going on more or less for two months. Curetting was advised but declined, and she was not seen again until six weeks previously, when a fungous growth was observed to be protruding from the os uteri. Vaginal hysterectomy was performed. The operation was a difficult one owing to the friability of the uterus, but it was successfully carried out and the patient made a good recovery. It was remarkable that an operation was still possible two years after the probable commencement of the disease. 3. This patient suffered intense distress from pelvic pressure and, the uterus being found enlarged and retroverted, the symptoms were attributed to the displacement. Abdominal suspension of the uterus by Kelly's method was performed, but owing to obstruction of the bowel the abdomen had to be reopened and the cause of the obstruction was found to be an adhesion of the rectum to the cervix, which it had been found impossible to separate at the original operation; the uterus was therefore allowed to return to its former position and the abdomen was closed. Her sufferings continued to be so great that she was obliged to relinquish her employment and when the removal of the uterus was suggested she readily consented to have the operation performed. About a fortnight previously Dr. Smyly performed a supravaginal amputation and the patient had made a good convalescence.

Mr. J. L. LANE showed a large Dermoid Cyst removed two months after confinement.

Dr. R. D. PUREFOY showed a specimen of (1) General

Follicular Enlargement of the Ovary; and (2) Rokitanski's Tumour of the Ovary.

Dr. PUREFOY read the Gynæcological Report of the Rotunda Hospital for the year 1901–02.—The discussion was postponed until the next meeting of the section.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—Meetings of this society were held on April 24th and May 1st, Mr. John Irving, the President, being in the chair.—Mr. J. Basil Hall read a paper on a successful case of Splenopexy.—Dr. E. Ward and Dr. P. Leech discussed the case and Mr. Hall replied.—Dr. Leech brought forward a case of Retro-peritoneal Hernia. The patient, a muscular man, 25 years of age, was seized in the early morning on a Sunday with violent abdominal pains. Two days later abdominal section was performed on account of intestinal obstruction when a left duodenal (retro-peritoneal) hernia was found, the sac containing about a yard of small intestine. The patient made a satisfactory recovery.—Dr. Ward, Mr. B. G. A. Moynihan, Dr. T. Churton, and Dr. J. B Hellier took part in the discussion and Dr. Leech replied.—Dr. J. Gordon Sharp read a paper on the Action of Morphine, Kino, and Calomel, illustrated by experimental and clinical evidence. In ordinary doses he believed that morphine was non-toxic to the patient after it had gone the round of the circulation. The loss of toxicity was not due to its rapid elimination by the urine, for if the ureters were tied and the drug was allowed to remain in the tissues there was no increase in toxicity. The loss of toxicity was probably due to the formation of a firm proteid compound of morphine which was not easily broken up. The fact that morphine could not easily be removed from the urine by the acetic and ethylic ether process in the presence of sodium bicarbonate supported this view of a combination of a proteid and the alkaloid. In future experiments Dr. Sharp intended to digest the morphine-laden urine with pancreatine and sodium bicarbonate and then to try to remove the morphine by the ethers. Going on to speak of kino, rhatany, and catechu he detailed some experiments which he had made with compound kino powder extending over long periods. The drug was given in five-grain doses in capsules before meals four times a day. The evacuations which previously had been dark, thin, watery, and frequent, now became pale, gluey, and less frequent. The motions were treated with absolute alcohol and examined after two days' maceration. The alcoholic extract on being examined was found to give no tannin or gallic acid reaction. The alcohol only appeared to dissolve the colouring matter of the kino (kino red). This body had lost its astringency. After some weeks' maceration the absolute alcohol was found to have precipitated the proteids and the tannin (kinoïn) of the kino was taken up by the alcohol. This tannin was only feebly astringent. It gave a reaction with ferric and ferrous salts. The urine gave no reaction with the combined iron salts, so it appeared that the drug when given in small doses only acted locally by forming a coagulum with the proteids, &c., and as it did so it gradually lost its astringency. This coagulum could only be broken up after prolonged maceration in alcohol. Calomel was next dealt with. The drug was found to be free from the perchloride when first obtained, but in from six weeks to two months it gave the reaction for the persalt. By experiment it was found that this change could be produced rapidly by digesting the calomel with cat's stomach—in several hours This action might explain why calomel acted so energetically and in small doses in flesh-eating animals. In human beings the salt might act energetically or not at all and much depended on the condition of the stomach at the time as to pepsinogen and acid. The purgative action might be a reflex one, as where the stomach contained much ferment and acid vomiting was set up, peristalsis followed and the contents of the canal were evacuated. Calomel, however, did not always act as a persalt. It might be transformed into a soluble mercurous proteid salt. The experimental evidence pointed this way, for when calomel was digested with active saliva or with fresh extract of calves' pancreas a solution was obtained which could be dialysed through parchment and passed through filter paper and when so treated and examined it gave a black precipitate with caustic potash, a green with dilute potassium iodide solution, and reacted to the electrolysis test. These tests proved the presence of a mercurous salt and of a soluble mercury salt.—Dr. Churton, Mr. T. H. Fox, and Mr. C. Richardson took part in the discussion and Dr. Sharp replied.—Dr. Bedford Pierce read a paper on the Treatment of Atonic Dilatation of the Stomach. The principal features of the treatment which he had adopted in a very severe case were the continuous application of heat and the persistent administration of food without restriction of solids or liquids. The treatment was introduced into this country by Dr. T. Taylor of Ealing and came from Switzerland where it was practised by Dr. Stendall. The patient should be placed under favourable conditions as regarded rest and freedom from worry and the recumbent position should be insisted upon for the first week or two. He should attempt no work and at first should not read or write. Stimulants, tea, and coffee were prohibited. No drugs of any kind were given. The heat was applied by relays of hot-water bottles day and night. The diet should be liberal, consisting largely of milk, eggs (yelks only), meat of all kinds (including pork), fresh and stewed fruit, macaroni, and farinaceous foods. Food should be taken and persevered with regardless of discomfort. A case was related in which dyspepsia and constipation had existed for 20 years and in which frequent attacks of colic had resulted in abandonment of work. The patient had had the best medical advice, had been to the Cape, had spent five weeks in a nursing home, and had taken complete rest for three months, but all without benefit; he had become profoundly emaciated. In the course of three months' treatment he gained three stones in weight, the constipation disappeared, and the stomach, which had previously reached below the umbilicus nearly to the crest of the ilium, retracted to its normal position. In discussing the merits of the treatment Dr. Pierce suggested that the heat promoted more efficient peristalsis and that the rest enabled the patient to digest more food than had been possible before. He deprecated the use of concentrated foods but considered ordinary food with an abundant indigestible residue without any restriction of liquids or solids the proper diet for atonic dilatation, provided there was no sign of ulcer or gastritis.—Dr. J. E. Eddison, Dr. Churton, Mr. S. Walker, Dr. A. Mantle, Mr. H. Littlewood, Dr. A. Christy Wilson, Dr. F. W. Eurich, Mr. R. L. Knaggs, and Mr. Richardson joined in the discussion and Dr. Pierce replied.—The following officers were elected for the session 1903–04:—President: Mr. Richardson. Vice-Presidents: Dr. A. Bronner and Mr. Ward. Treasurer: Dr. Eddison. Librarian: Dr. A. G. Barrs. Auditor: Dr. C. M. Chadwick. Committee: Dr. J. Gordon Black, Dr. W. A. Evans, Mr. E. Roberts, Dr. A. H. Bampton, Mr. W. Thompson, Dr. J. W. H. Brown, Dr. J. G. E. Colby, Dr. S. M. Hebblethwaite, Mr. J. H. Woods, Mr. Irving, Dr. G. I. Swanson, Mr. J. J. Pickles, Mr. Edward Ellis, Mr. H. de C. Woodcock, and Mr. Michael A. Teale. Honorary secretaries: Dr. E. F. Trevelyan and Mr. Knaggs.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on May 1st, Mr. Rickard Lloyd, the President, being in the chair.—Mr. J. R. Lunn read notes of an obscure case of Intestinal Obstruction due to an Obturator Hernia. The patient, a widow, aged 61 years, was admitted into St. Marylebone Infirmary on Dec. 30th, 1902. She was very obese. The pulse, the respiration, and the temperature were normal, the tongue was clean, and the abdomen was not distended. She was slightly jaundiced. On the right side there was a reducible femoral hernia. Nothing was found on examination by the rectum or by the vagina. 24 hours after admission the patient began to vomit fæcal matter, the tongue was dry and furred, and the symptoms suggested some obscure cause of intestinal obstruction. On opening the abdomen the small intestines were found to be distended and covered with lymph. Towards the left iliac fossa the small intestine was found to be collapsed and apparently bound down to the pubes. During the examination fæces welled up from the left iliac fossa. A distinct fulness was then discovered in the upper part of the left thigh below Poupart's ligament. On incising this swelling a piece of gangrenous omentum was found which was ligatured and removed. The clamped ends of the intestines were then brought up into the abdominal wound, three inches of the ulcerated gut on each side of the perforation were removed, and a Murphy's button was introduced. The abdominal cavity was washed out with saline solution and the wound was closed with silkworm gut. The operation lasted two hours and the patient died a few hours later from peritonitis and cardiac syncope.—Mr. E. Percy Paton and Mr. G. Twynam discussed the case.—Dr. J. E. Squire continued the adjourned discussion of his paper on the Modes of Cure in Pulmonary Tuberculosis. After pointing out that the arrest or the advance of the disease was determined by the nature of the reaction changes in the tissues and so depended upon what they called the resisting power of the tissues, Dr. Squire said that the aim of modern treatment was to strengthen this resisting power and to kill or to remove from the body the causative micro-organisms. Thus their efforts might be directed towards strengthening the resisting powers of the cells and tissues of the body, so enabling them to withstand and to destroy the bacilli, or they might attempt to destroy the bacilli by germicide and antitoxic remedies. A knowledge of pathology assisted them in determining which mode of attack to select. One of the early results produced in the lung by the tubercle bacillus was to block up not only the alveoli but also the blood and lymph channels in the affected area. Thus, blood-borne antiseptics, as well as any that might be inhaled, were prevented from reaching the stronghold of the bacilli. Such treatment would, however, destroy any bacilli that escaped from the focus of the disease and thus prevent extension. The antiseptics used, however, could only be of moderate strength. Antitoxin treatment was looked upon by many as the main hope of the future, but there was a wide difference between the short sharp fight with the diphtheria bacillus and the prolonged struggle in tuberculosis. Tuberculin seemed to be dangerous; it appeared to increase the rapidity of the tuberculous process, and in the majority of cases safety was to be sought in the slower processes which led to the formation of fibrous tissue. X rays, sun baths, and electric currents had been used without any convincing measure of success. For the arrest of the disease the alternative principle of treatment by assisting the tissues of the body to resist the bacilli offered better hope of success. Of the hygienic requirements fresh air claimed primary attention, but certain other aids to hygienic treatment deserved consideration. Among the processes which tended to limit the action of the tubercle bacilli an increase in the wandering cells was important; thus anything which tended to leucocytosis might have a very beneficial effect. With this object cinnamic acid, hetol, and nuclein had been used The excess of proteid food which was taken in forced feeding was also said to produce leucocytosis. Food was certainly required in full quantity, but it was its assimilation which was important and it might be necessary to remedy a faulty digestion. With regard to cough it was generally better to prescribe expectorants to make the cough effective than sedatives to check it In conclusion Dr. Squire considered that drugs should be used as auxiliaries only to help the patients to get the fullest benefit from hygienic treatment.—Mr. R. W. Lloyd mentioned a case in his experience in which alleviation of symptoms, and to some extent of the signs, of phthisis had occurred as a result of the patient keeping her windows widely open day and night. At the same time the discovery of scars in the lungs post mortem had shown that cure used to occur before the value of open air was recognised.—Other members continued the discussion and Dr. Squire replied.

Laryngological Society of London.—A meeting of this society was held on May 1st, Dr. P. McBride, President, being in the chair.—Dr. Atwood Thorne showed a case of Epithelioma of the Larynx which had been previously shown in January. The interest of this case was that a certain amount of improvement had taken place under the administration of potassium iodide and mercury. When the patient was seen in January last the left cord was absolutely fixed and there was a growth of the left arytænoid extending to the left arytæno-epiglottic fold. Under this treatment the left cord had recovered a fair degree of mobility and the continuous growth had shown as two growths with an intervening space and a submaxillary gland had become distinctly smaller. Latterly, however, the case had [illegible] left cord had become [illegible] occurred.—Dr. W. H. [illegible] Fauces in a fem[illegible] sented was very [illegible] but the fact that [illegible] syphilis, either pr[illegible] been treated for five months with anti-syphilitic remedies with no benefit and that latterly some improvement had resulted from the administration of arsenic led Dr. Kelson to form the opinion that the disease was lupus.—Mr. R. Lake exhibited (1) a case of Ulceration of the Tonsil involving the Posterior Faucial Pillar in a woman, aged 35 years; (2) a microscopical specimen of a large Papilloma in the posterior aspect of the cricoid cartilage which was the apparent cause of obstruction in a case of carcinoma of the upper end of the œsophagus; and (3) a Papilloma from the region of the inferior turbinal with absorption of the internal antral wall.—Dr. J. Donelan showed a case of Subglottic Thickening of the Vocal Cords in a man, aged 38 years (? pachydermia).—Mr. E. B. Waggett showed a case of Primary Tuberculosis of the Nasal Septum in a man, aged 35 years (with microscopical specimen). The patient had [illegible] of pain in the nose and f[illegible] and exhibiting an exter[illegible] diameter. A specimen taken from the edge of the ulcer showed tuberculous tissue with well-developed giant cells. Examination of the chest revealed merely increased vocal resonance at the right apex behind and in front. There was no history of cough or of hæmoptysis. The symptoms had existed for two years.—Dr. E. Furniss Potter exhibited a case of Swelling in the Postnasal Space in which the diagnosis lay between syphilis and malignancy. It was impossible to obtain any history of symptoms—sore-throat and dysphagia—dating further back than three weeks previously.—Dr. J. Dundas Grant showed a case of Chronic Laryngitis with Papillary Thickening of the Vocal Cord.

Rochdale and District Medical Society.—A meeting of this society was held on May 6th, Dr. J. Melvin being in the chair —Dr. J. A. Ashcroft made some remarks on Puerperal Eclampsia. He considered it to be the best practice not to induce labour but to rely on medical treatment.—Mr. G. W. Malim invariably had recourse to bleeding in eclampsia, and out of a considerable experience he had never had a fatal case.—Dr. A. Wallace also spoke of the efficacy of bleeding.—Mr. H. H. I. Hitchon gave an account of a rapidly fatal case of Hodgkin's disease. A well developed boy, aged 12 years and nine months, was first seen on Feb. 23rd, supposed to be suffering from mumps. The swelling had been first noticed four weeks before and had increased. The boy felt well but easily became tired. The family history was good. The upper cervical glands on both sides were much enlarged, the lower cervical glands were enlarged to a less extent, and the axillary and femoral glands were slightly enlarged. The glands were comparatively soft, neither painful nor tender and not matted together. The spleen projected one inch below the costal margin, the liver was not enlarged, and the bones were not tender. The patient was distinctly anæmic. He became rapidly weaker and four days later was confined to bed. Two days later still he was very weak and almost colourless, his evening temperature being 103° F. The glands were considerably larger and the spleen reached to midway between the costal margin and the umbilicus. The abdomen was large but not tender. The patient vomited small quantities of blood and submucous hæmorrhages were observed on the palate and tonsils. The breath was foul. On the next day the cervical glands had still further increased and the spleen had enlarged another inch. On the following morning vomiting of large clots of blood occurred, followed by fæcal matter, and death took place. The total duration of the case was five and a half weeks. The blood was not examined and a post-mortem examination was not obtained.

Kidderminster Medical Society.—A meeting of this society was held on May 1st, Mr. J. Lionel Stretton, the President, being in the chair.—The President showed a number of specimens and patients, among the latter being a woman, aged 49 years, on whom he had performed Gastrojejunostomy for Malignant Disease of the Pylorus; the approximation was accomplished by means of a Murphy's button which had not at the date of the meeting (one month after the operation) been passed. The patient had made a good recovery, had gained 8 pounds in weight, and was [illegible] gall-stones were evacuated; these he considered had been imbedded in the thickened omentum, having previously ulcerated through the gall-bladder.—Dr. Addenbrooke also showed a case of Progressive Muscular Atrophy in which the right hand and forearm were chiefly affected; all the muscles of the right hand and thumb were much wasted. The muscles of the forearm had improved under galvanism. The patient was a man, aged 25 years.—Mr. A. C. Oldham read a paper on Some Diseases of the Naso-Pharynx.—A discussion followed.

Reviews and Notices of Books.

Diseases of Women: A Clinical Guide to their Diagnosis and Treatment. By GEORGE ERNEST HERMAN, M.B., F.R.C.P. Lond., Obstetric Physician to, and Lecturer on Midwifery at, the London Hospital; Examiner in Midwifery to the University of Cambridge and the Royal College of Physicians. New and revised edition with upwards of 250 illustrations. Demy 8vo. London: Cassell and Co. 1903. Pp. 884. Cloth, 25*s*.

As some six years have elapsed since the appearance of the first edition of this Clinical Guide to the Diseases of Women we are glad to see that Dr. Herman has brought out a new and revised edition. It is true that very little alteration or emendation has been found necessary, but that may well be taken as a proof of the excellence of the work. On page 83 a new section has been added upon the surgical treatment of chronic ovarian pain. The author states that in very bad cases the vicious circle of effects which occurs in such patients can at times only be broken by removing the ovaries. The results of ignipuncture are disappointing and resection of part of the ovaries is often followed by the return of the pain, so that in extremely bad cases the removal of one or both ovaries is the only thing that brings relief. Such an operation is obviously only justifiable as a last resort.

In considering the surgical treatment of cancer of the cervix Dr. Herman lays stress upon the importance of avoiding inoculation of the wound surfaces with portions of the cancerous growth. He advises as a preliminary step that the growth should be thoroughly curetted and cauterised. He then recommends the method of performing vaginal hysterectomy with hemisection of the uterus practised by Doyen. We are glad to see that the more surgical method of ligation of the broad ligaments has been substituted for the use of pressure forceps. We do not, however, agree with the author in his practice of hemisection of the uterus in performing vaginal hysterectomy for cancer of the cervix. If the growth mainly involves the lower part of the cervix no doubt it is possible completely to curette and to cauterise it; but if, on the other hand, it has begun in the upper part of the cervix and the external os is not much involved, then it is almost impossible completely to curette the growth away or to cauterise thoroughly the whole of the raw surface left. In such a case hemisection of the uterus is extremely likely to expose a fresh portion of the growth from which infection of the wound surfaces may well occur. Doyen's method of splitting up the uterus is peculiarly applicable to cases of fibroid tumours of the uterus and cases of hysterectomy for chronic pelvic inflammation, but it is, we think, both unnecessary and unsuitable for most cases of carcinoma of the cervix. The section upon the surgical treatment of fibroid tumours of the uterus has been almost entirely rewritten. Dr. Herman recommends amputation of the body of the uterus, commonly known as "supravaginal abdominal hysterectomy," and when performing panhysterectomy he thinks that the best method is that of Doyen. Myomectomy he considers the ideal operation when the patient is young and, failing this, one or other of the varieties of hysterectomy.

The book is one of the best clinical works upon gynæcology in the English language, and the present edition fully maintains the high standard of the first. There is a familiar error which we are surprised to see in a book by so careful an author as Dr. Herman—viz., Gärtner for Gartner. In Figs. 197 and 198, copied from Mr. Alban Doran's book on Tumours of the Ovary, Fallopian Tube, and Broad Ligament, the "umlaut" is correctly omitted. We had hoped that in a new edition many of the very crude and inartistic illustrations would have been replaced by others more worthy of the letter press. This has unfortunately not been done, although a few new figures have been added.

Surgical Anatomy: a Treatise on Human Anatomy in its Application to the Practice of Medicine and Surgery. By JOHN P. DEAVER, M.D., Surgeon-in-Chief to the German Hospital, Philadelphia. Vol. III. (pp. 816): Abdomen, Pelvis, Thorax, and Lower Extremity. London: Rebman Limited. 1902. The three vols., with 499 plates, price six guineas net.

THIS is the third and concluding volume of this exhaustive and bulky treatise. Like the first two volumes it is profusely illustrated, the number of full-page plates in this volume being no less than 178. As all the drawings have been prepared from dissections specially made for the purpose of this treatise the amount of labour expended both by dissectors and artists must have been immense and the author must be almost unreservedly congratulated on the result of his labours. There is, however, one point in connexion with the illustrations which calls for comment: there is a most striking and unnecessary difference in the scales to which some of the pictures have been drawn. A comparison, for instance, of the representations of the kidneys, liver, and spleen gives an altogether erroneous idea of the relative sizes of those organs, the bulk of the spleen appearing far greater than that of the other organs mentioned. The size of the heart, too, varies quite unnecessarily in successive representations of it. These variations are the more misleading since the scale to which the figures are drawn is never indicated.

In dealing with applied anatomy, as distinguished from anatomy proper, the difficulty is to know where to draw the dividing line. The author of the present work has evidently encountered the same problem. He has adopted the plan of giving anatomical descriptions which, when compared with those usually met with in works of this kind, are unusually full. The result is that the work appears to contain much more of ordinary anatomy than of its application. At the same time, the fact that anatomy is dealt with so fully gives rise to a disposition to criticise the book from a purely anatomical standpoint, which, perhaps, is hardly fair. Be that as it may, the fact remains that visceral anatomy has made huge strides in recent years, particularly since the adoption of formalin and other methods of hardening the viscera *in situ.* Now the bulk of the volume under review is devoted to a consideration of the anatomy of the abdomen, thorax, and pelvis, and we do not find overmuch of this recent knowledge reflected in the text. This is possibly because the preparation of the volume was commenced some time ago, but at the same time it is to be deplored as detracting in a measure from the value of the book.

Just as it is difficult to separate applied from systematic anatomy so, on the other hand, it is difficult to separate it from surgical technique. The author has been fairly successful on this score, although we find in places details which appear to belong more properly to a treatise on surgery. For instance, we find minute directions given for the performance of vaginal and abdominal hysterectomy and other operations together with details on suturing which seem quite unnecessary and out of place. What is the aim of the book? We gather from the number of illustrations, from the character of the anatomical descriptions, and especially from the minute directions given for *dissection*, that the treatise is intended to teach the surgeon anatomy as well as some of its practical applications All this should surely be unnecessary if anatomy is learned in its proper place and at the proper time—we mean in the dissecting room during the earlier years of studentship If it is not then learned no series of illustrations, however excellent they may be, and no book descriptions, however full, can adequately supply the deficiency We much doubt if such a sumptuous volume as this will ever find its practical use in the dissecting room. Despite the points we have criticised, the book is a monumental production and possesses a wealth of detail The amount of work lavished on it has evidently been very great Its usefulness is enhanced by the presence of a very complete index in which, by the use of heavy faced type, the plates illustrating each organ and region are at once indicated Curiously enough, we could find no plate indicating the position of the ovary

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Diseases of Women By E C DUDLEY, A M, M D Third edition, revised and enlarged With 474 illustrations, of which 60 are in colours, and 22 full page plates in colours and monochrome London Henry Kimpton 1903 Royal 8vo, pp 761 Price 21*s* net

THE appearance of a third edition of Dr Dudley s work upon the Diseases of Women is a proof that it has met with appreciation from students and practitioners The author has made numerous corrections and alterations and has very thoroughly revised the work Many of the chapters have been rewritten and others have been recast and transposed to other parts of the book A large amount of the letterpress has been arranged in the form of tables and parallel columns with a view to make it more useful to students for class work and to practitioners for reference Among the most interesting additions are the figures illustrating many of the major and minor gynæcological operations For example the consecutive steps in hystero myomectomy are shown in 12 drawings salpingectomy in five drawings, vaginal hysterectomy in 15 drawings, ovariotomy in eight drawings, and curettage in five drawings The total number of illustrations has been increased by 21 and a considerable addition has been made to those in colours and to the full page plates Drawings illustrating operations are undoubtedly useful but at the same time they tend to minimise the difficulties of technique and hardly ever give a faithful representation of the conditions as they are met with in actual practice A good instance of this is seen in Plate XI, representing ligature of the broad ligament in vaginal hysterectomy. The device of using an ordinary needle held in a needle holder and passed through the broad ligament blunt end first is undoubtedly ingenious and should prove useful at times Dr Dudley does not approve of the more radical methods of removing the uterus for malignant disease recommended by many modern surgeons As he points out, removal of the peri-uterine glands and the lumbar glands and excision of the broad ligaments close to their base undoubtedly add to the traumatism, are often attended with much difficulty, and require a very prolonged operation attended with a corresponding increase in the amount of shock

The method of placing the chief diagnostic features of different conditions in tables is undoubtedly useful but must always be taken with a certain amount of reservation For instance, we find that the chief distinctions in the diagnosis of a case of hydramnios from an ovarian cyst are given as follows In hydramnios the student is told that there is evidence of pregnancy, rapid development of the tumour, ballottement, and symmetrical distension of the abdomen, while in a case of ovarian cyst there are no signs of pregnancy, a slow development of the tumour, no ballottement, and unilateral distension of the abdomen He is not told that in many cases of hydramnios the evidences of pregnancy are difficult to obtain, nothing is said as to the method of obtaining ballottement in such a case, and the statement that an ovarian tumour sufficiently large to be mistaken for hydramnios causes unilateral distension of the abdomen is more often found in a text-book than confirmed as a clinical fact at the bedside Many of these tables are, however, exceedingly good and should prove most useful to the student in summarising his knowledge

The work has been considerably enlarged and improved since the appearance of the first edition and is now a very excellent manual of its kind The want of proportion in the amount of space allotted to various subjects still seems to us to exist but to a much less extent than it did We are glad to see that the chapter on Pelvic Massage has been considerably curtailed and partly rewritten We still think that too much detail is given in the treatment of injuries to the pelvic floor and to the cervix, but no doubt we are influenced by the views held in this country as to the importance of such traumatism The illustrations, especially some of the coloured ones, are very good, but many more of the original ones might well have been omitted or replaced by better drawings

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LIBRARY TABLE

Book on the Physician Himself By D W CATHELL, M D Philadelphia F A Davis Co 1902. Pp 411 Price $2 50 —This is the eleventh edition of the original work and has been revised by the author and his son Dr W T Cathell It is written in a cheery, breezy style and shows wide reading, for it swarms with quotations Be this as it may, it contains many valuable pieces of advice upon such subjects as quackery and the practitioner's duty to his patients, to his fellow practitioners and to himself Allowance being made for the differences in social customs which exist in Great Britain and the United States, practitioners, and especially those just entering practice, will find many valuable hints in this book

Rate Supported versus Voluntary Hospitals By J G CRAGGS, M V O, F C A London The Scientific Press, Limited 1903 Pp 37 Price 1*s* 6*d* net.—This pamphlet is an expansion of an article by Mr Craggs which appeared in the *Times* of April 7th and upon which we commented in our issue of April 11th, p 1044 We have nothing to add to what we then said except that in the light of the figures and facts, which are quoted more fully in the pamphlet than they were in the article, we should say that if every subscriber to the Hospital Sunday and Saturday Funds were to read and to digest both facts and figures the amounts received by the two funds in question would be doubled

The Annual Charities Register and Digest, 1903 London Longmans, Green, and Co Pp ccviii -734 Price 5*s* net —This is one of the annuals which come out year after year at a standard pitch of excellence and hence the reviewer's work consists in praise Mr Loch's introduction is in itself a "Summa of almsgiving Every kind of charitable organisation or institution is classified in the book before us and therefore no one has any excuse for giving to undeserving charities We think, as we have said upon previous occasions, that some of the "spiritual institutions" might be eliminated from a book dealing with charities For instance, neither the Church Association nor the English Church Union has any right to be called a charity and so with other institutions which we find in the section of "spiritual."

The Victualling of the Royal Navy Past, Present, and Future By ALEXANDER TURNBULL, M D Edin, Inspector General of Hospitals and Fleets (retired) London Elliot

Stock. 1903. Pp. 31. Price 1*s.*—This little pamphlet is compiled "from State papers, historical documents, official sources, &c., and a seventeenth century private diary not hitherto published," and is an extremely interesting work. The victualling of the navy in Georgian, and even in early Victorian, times was by no means above reproach, but the new scale of victualling which comes into operation this year seems very good. Readers of Marryat will remember Mr. Chucks's opprobrious epithet of "burgoo swilling" applied to the unhappy cooper who had lurched against him. "Burgoo," or "bargow," is described by Surgeon Thomas Trotter, M.D., R.N., 1792, as thick gruel made of oatmeal. Oatmeal, however, no longer forms part of the ordinary ration but is retained for stokers to be mixed with water as a drink.

The City of London Directory, 1903. London: W. H. and L. Collingridge. Pp. 1194. Price 12*s.* 6*d.*—In the preface to this directory, which is the thirty-third annual edition, it is stated that it "is the only annual volume containing valuable and exclusive information in regard to the City of London, the Corporation, the Livery Companies, and other public bodies." With this statement we acquiesce, as we think that in this respect the Directory is a valuable book of reference, but we consider that the remaining portions could be improved. We notice, for example, that a firm of well-known carriers is called Pickford's (lim.), that the British Photo-Engraving Co. is called the British Photo-Engineering Co., that in one case at least "Verulam" is spelled "Verulum," that in one instance at least the old address of a firm is given from which they removed some months ago, and that in the Street Directory "Bishopsgate-street Without" is continued on the next page as "Bishopsgate-street Within." We may also point out that THE LANCET is published on Fridays and not on Saturdays, as stated in the Newspaper List. On the whole, however, the present issue is an improvement on that of last year.

How and Where to Insure. By CHARLES COX. London Effingham Wilson. Pp. 125. Price 1*s.*—The greater part of Mr. Cox's useful work was contributed to the *Empire Review*, where he writes under the pseudonym of "Thrift." He appears to have an excellent grasp of his subject and to have written in the interests of the would-be insurer and not in that of any particular office. Therefore his deductions are the more worthy of consideration, and, in our opinion, cannot fail to be useful in guiding to the successful choice of a suitable office in any particular class of insurance.

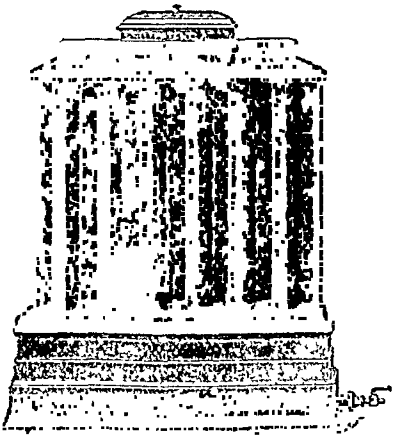
JOURNALS AND MAGAZINES.

The Medical Journal of the Italian Navy.—The first issue of the *Annali di Medicina Navale* for the present year appears in the form of a double number owing, we are informed in a prefatory note, to the fact that some important and richly illustrated articles have taken more time in preparation than was anticipated. In order to compensate subscribers for the delay the editor consequently decided to publish the parts for January and February under a single cover and he has, moreover, endeavoured to improve the quality of the journal by making it respond more adequately to the labour of his collaborators and by rendering it more worthy of the sympathetic reception which is accorded to it by the medical public—foreign as well as Italian. So manifold and complex are the duties imposed on medical officers of the Italian navy that the editor would not have felt surprised had they entirely failed to furnish him with material. That some among them did supply him is an example of the utmost zeal and self-abnegation. Had they only the necessary time to collect and to arrange their clinical notes what a rich and useful harvest would be reaped by the *Annali.* The double number thus introduced contains several articles of merit evincing much labour, but there is nothing specially referable to the navy or to naval matters. A feature of the periodical consists in a review of current medical literature. The synopsis is not only copious but well arranged and reflects much credit on the compilers and translators.

New Inventions.

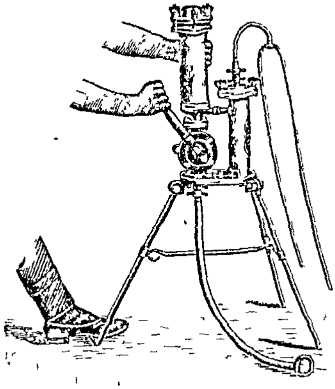
THE "SPEEDON" HOT-WATER RADIATOR.

THERE are one or two important advantages connected with the use of this appliance for warming apartments that are well worth attention. The apparatus consists in reality of a series of tubes communicating with each other and up and down which a rapid circulation of hot water is maintained. The heat of the water radiates readily into the room owing to the great radiating area which the stove presents. The surfaces of the columns are zig-zag, thus 〰. The radiator which we tested contained almost exactly three gallons of water. The source of heat is an atmospheric gas-burner consuming, according to our observations, about 4½ cubic feet of gas per hour. We found that it takes a little over two hours to raise the water from ordinary temperature to the boiling point, that is to say, at the expense of rather less than 10 cubic feet of gas. All this time there is a steady emission of heat into the room. As a matter of fact, when the water has reached to within a few degrees of boiling point the gas may be turned down, the water serving to distribute the heat of the gas flames in a uniform and regular manner. This principle of heating by means of gas is well adapted for bedrooms as there need be no danger of gas escaping or of objectionable fumes arising. Thus the gas may be lighted an hour or so before retiring and at the time of retiring the gas may be turned off altogether, when the radiator will continue to warm the room for some time and no anxiety need be felt as to gas fumes or as to the working condition of the burner. According to our experiments it takes quite four hours before the stove cools down to the temperature of the room again. A flue is provided to carry the products of combustion up the chimney, but as we have already said the stove requires no attention after the gas has been turned out, it then continuing to exert a marked warming effect upon the room. The appliance is thus economical, effective, and safe. The Speedon radiator is manufactured by the Coalbrookdale Company, Limited, of 141, Queen Victoria-street, London, E.C.



THE BROWNLOW FIELD SERVICE FILTER.

THIS filter has been designed especially for transport purposes. It may easily be packed in a wicker basket which can be strapped to the pack saddle. The dimensions of the basket are 2 feet 3 inches in length, 14 inches in width, and 10 inches in depth. A glance at the accompanying illustration will show that the filter consists practically of three sections. The filtering-tube is contained in a copper jacket which communicates with a clarifying filter immediately above a semi-rotary pump. The water enters the hose at the bottom by the suction caused by a few strokes of the rotary pump and then passes into the clarifying cylinder which, as shown in the illustration, is grasped by the left hand of the operator. The clarified water is then discharged into the sterilising filter, germ-free water escaping ready for drinking purposes at the two pipes shown. The clarifying cylinder contains an inside case of gauze and two clarifying bags. The sterilising cylinder contains an unglazed porcelain filtering tube or candle which, according to the experiments of Professor G. Sims Woodhead and Dr G. E. Cartwright Wood, prevents the transmission of disease germs when worked under proper conditions, so that it was concluded that this filter would protect against the transmission of water-borne disease. Excellent attention, we find, has been paid to details, bearing in mind the special uses of this filter. It is compact, very easily put together, and all the parts are well made and of solid construction. One field-service filter is sufficient, it is stated, for the needs of a unit of 100 men and one man at least in each section is expected to superintend its management. The rate of pumping should not exceed 20 to 35 strokes per minute and in the event of the rate of filtration becoming slow a new clarifying bag should be introduced and, if considered necessary, a new cylinder also. Instructions to this effect are supplied with each outfit The manufacturers are Messrs. Slack and Brownlow of Gorton, Manchester.

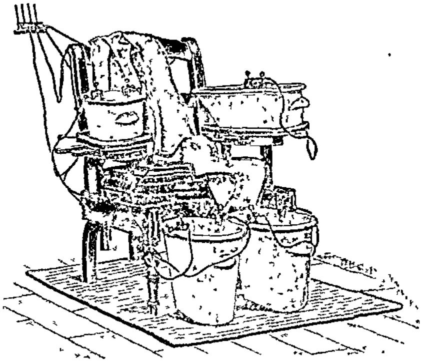


"OCCILANA" CLOTH.

THE manufacturers of "Occilana" cloth have afforded us an opportunity of examining it at various stages in its preparation and samples of fabric have been submitted to us representing first the unscoured fleece with the natural oil retained, secondly the yarn spun ready for weaving, and finally the finished material. Chemical and microscopical tests throughout determined at once that the fabric is all pure wool The wool is said to be produced entirely in the west of England Further, no evidence was obtained of the presence of irritating substances in the form of injurious dye stuffs or of any residue of objectionable bleaching agents. The material is warm and comfortable and porous, though shower proof. It has been pronounced a cloth material of good quality by a cloth expert. The cloth may be had in a variety of patterns and is supplied by Messrs. S Fisher and Sons of 215, 217, and 219, Regent-street, London, W.

A FOUR-CELLED ELECTRIC BATH.

THE four-celled electric bath, devised by Dr. C. E. Schnée of Carlsbad and shown in the illustration, presents no intricate complications either in the arrangement of its parts or in its therapeutic use. It may be said to consist of two principal portions—namely, (1) an armchair capable of adjustment in a variety of positions; and (2) a set of four basins or small baths, two of which stand on the floor, while the other two stand on the arms of the chair. The patient uncovers only his arms and lower legs and sits in the chair with each of these limbs in one of the baths. The baths are filled with water or medicated solutions, and in each of them two carbon electrodes dip into the liquid. When the patient's limbs are immersed it is obvious that a current may be sent through his body in either direction from any bath to any other one, or even from any one to the other three collectively, so that a diversity of combinations is offered for the choice of the medical attendant. These variations of direction can be made instantly by means of moveable plugs fitting into holes in a switch-board, in addition to which arrangements are provided for measuring and regulating both the quantity of the current (in milliampères) and its intensity (in volts); these two conditions may also be variously combined, so that a current of small quantity may have a high intensity and *vice versâ*. In each of these baths the effective electrode is of course not the carbon conductor but the liquid contained in the bath The current is therefore applied to the whole of the immersed surface, which for the upper limb might amount to 1200 square centimetres (186 square inches) and for the lower limb might amount to 1400 square centimetres (217 square inches) For many therapeutical purposes it is desirable to have electrodes of considerable size and the above-mentioned areas of skin are much greater than those of the metallic electrodes usually employed. Galvanic, faradic, or sinusoidal currents may be used; an alternating current may be previously changed into a direct one by means of a transformer. Currents having a quantity of from two to about 30 milliampères and an intensity of from 10 to 45 volts may be employed. Cataphoresis, or the introduction of medicinal substances into the system by electrical transference through the skin, can be easily accomplished by filling the baths with the proper solutions Dr Schnée states that from the year 1896 to the end of 1902 he has treated 2577 patients with this apparatus.



IMPROVED CONTINENTAL SERVICES.—By a new express service passengers travelling by the Harwich-Hook of Holland Royal British mail route now arrive at Berlin much earlier than hitherto; leaving London (Liverpool-street Station) at 8 30 P.M. Berlin is reached at 6 43 next evening. Corridor carriages and restaurant cars run between the Hook of Holland and Berlin. By this new service communications with other north German towns, with Saxony, Austria, Russia, and Sweden have been much improved and accelerated Passengers from the northern and midland counties of England leaving in the afternoon can travel directly to Harwich alongside the steamers, thus saving the trouble and expense of crossing London. A dining-car and through corridor carriages run between York and Harwich, also through carriages to and from Manchester and Liverpool *viâ* [illegible] London and North-Western and Mi [illegible] return journey to [illegible] be effected by the [illegible]

THE LANCET.

LONDON: SATURDAY, MAY 16, 1903.

The Address in Medicine at the American Medical Association.

IT must always be interesting to the members of any profession to be put in a position which enables them to contemplate work kindred to their own as it is influenced or modified by conditions of society somewhat differing from those of which they have experience. On this account, even if on no other, we should welcome the Address in Medicine lately delivered by Dr. ANDERS of Philadelphia at the meeting in Chicago of the American Medical Association—an address purporting to be on "Social Conditions in America in their Relation to Medical Progress and Disease." The title is an ambitious one and seems to justify expectation of a very comprehensive survey of the fields of medicine, of pathology, and of therapeutics. We cannot say that this expectation is altogether fulfilled; for, in truth, a large part of the address is somewhat vaguely declamatory and, although full of sounding phrases, seems to leave us destitute of any very definite information upon the subjects with which it may be presumed to deal. We are told, indeed, that "our possession of unclassified facts is increasing with uncomfortable rapidity," but we receive a very slender modicum of information as to the general nature of these facts or as to the precise directions in which it is expedient that their classification should be attempted. We are told, again, that "epoch-making discoveries and important, far reaching scientific effort *is* justly the boast of the American profession"; but the discoveries in question are not described in detail nor is any reason given for assuming that "far reaching scientific effort" is in any way peculiar to America. The discovery of the anæsthetic properties of ether might, indeed, be called "epoch-making" by any who were so left to themselves as to use the term at all, but where are the rest? It is well known that SHAKESPEARE was an American citizen, but can the same claim be substantiated with regard to HARVEY, or JENNER, or PASTEUR, or LISTER? These are men whose discoveries, if they have not made epochs, have at least marked them and whose names will still be regarded with veneration by their countrymen in future generations, although not, we trust, with boastfulness—a state of mind antipathetic to science and calculated rather to prevent than to promote discovery.

With regard to the general social conditions of America, as they bear upon the preservation or the restoration of health, the address gives us very little precise information, and it may well be that the author has thought it unnecessary to dwell upon facts which were more or less familiar to his audience. It is, indeed, said that "the universal spirit of haste has taken possession of our professional life," and that "the cure must result from a readjustment of the home life and habits of the professional and other classes." This would mean, we are told, "a return from our present-day restlessness and rush to a quieter period, to a 'Mansfield Park,' with its charm of quiet village life; a return to a normal life with natural intellectual tastes, and to calm, patient, original observation that fosters vital force and successful endeavour." Surely the placid spirit of JANE AUSTEN would be perturbed if it were made acquainted with such a description of the state and surroundings of MRS. NORRIS and the BERTRAMS. The title of the address led us to hope for information upon the relations in America between the medical profession and the large classes of people to whom the payment of adequate medical fees would be impossible. Our readers know only too well the difficulties which the problems hence arising offer to older societies and the slender amount of success which has hitherto been achieved in dealing with them. In England the medical officers under the Poor-law are very inadequately paid and the whole system of club and dispensary practice is riddled by scandalous abuses for which, so far, neither reason nor agitation has succeeded in suggesting any sufficient remedy. In Germany matters are even worse. A letter lately appeared in the *Times* in which the writer gave a highly interesting account of the effective manner, as he regarded it, in which the problem of medical attendance on the labouring classes had been solved in that country and in which he said that the German workman had determined to banish squalid poverty from his class. By his subscriptions noble hospitals and convalescent homes had been erected and were maintained and generally a sort of golden age in relation to sickness had been inaugurated. It has since appeared that the physicians employed by the societies into which German industry has been organised for the accomplishment of these wonders have been ground down to starvation point, that their remuneration has been at the rate of about twopence a visit, and that they have at last formed a counter organisation which threatens a universal "strike" of the medical profession against the societies if more reasonable terms are not previously agreed upon. The same question, although possibly under a slightly different form, must of necessity present itself in America, and it would be a matter of extreme interest to learn whether any solution of it has been reached. The very absence of any reference to the subject, in an address bearing the title which we have quoted, seems at least to show that the friction hence arising cannot be so great in America as it is in this country or in Europe.

When Dr. ANDERS passes away from questions of a very general character it is to call attention to certain phenomena in relation to disease which seem to us to be of great significance. He dwells upon a considerable recent increase in cancer, affections of the kidneys, and fatty and fibroid degenerations. Coincidently, he tells us, with the advent of epidemic influenza, there has been a heavy death-rate in Philadelphia from lobar pneumonia; and he gives a table showing the results of post-mortem examination in 275 cases of death attributed to this cause which occurred in the Philadelphia Hospital. Of these, 250, or about 90·9 per cent., showed cardio-vascular lesions, principally chronic endocarditis and general atheroma of the vessels. Chronic interstitial nephritis was noted in 52·7 per cent., chronic parenchymatous nephritis in 18 per cent., and acute nephritis in 13·8 per cent. It is highly probable, of course, that the pre-existing cardiac or renal disease may have been largely contributory to the fatal issue in these cases and that post-mortem examinations of a more general kind would have shown very different results. But these, such as they are, surely indicate a wide prevalence of the degenerations produced by alcohol and point to the extensive and far-reaching influence in the great cities of America of the agent which is, perhaps, the chief cause of premature *mortality amongst ourselves. Dr. ANDERS does not himself* offer any explanation of the facts which he records, but we can hardly be mistaken in the opinion that they justify an earnest endeavour on the part alike of philanthropists and of physicians to bring home a knowledge of the deleterious effects of alcohol to the classes which, in the present state of civilisation, are on the whole most liable to suffer from them.

Back to the Land.

THE paper read by Mr. RIDER HAGGARD at the weekly evening meeting of the Royal Institution on May 8th presented to his hearers in a condensed form a very interesting portion of the facts and conclusions dealt with by him in his recently published work on "Rural England." Mr. HAGGARD applied the title of "Rural England" to his lecture also, but he intimated when he began that he could only treat certain aspects of so large a subject in the time at his disposal. The particular points to which he accordingly devoted his attention were principally those arising out of the debated question of small holdings. Mr. HAGGARD discussed the prevalence of these in comparatively recent days and put forward evidence to show that in times of which no definite records are available small holdings were successfully owned by men who, whether they lived hard lives or not, at all events got a living out of a few acres of land that was their own. With the practical possibilities of small holdings in modern times he dealt at some length; after pointing out the extent to which small holdings have disappeared, he turned to the question as to how they might be re-introduced. The personal observation which Mr. HAGGARD has brought to bear upon the topics which he has now studied for a considerable time with great energy and industry enabled him to enforce the various views which he put forward by practical illustrations of value, and he enjoyed the advantage of being a skilled narrator who could tell his story so as not only to inform but to interest his audience. *None will disagree with Mr. HAGGARD* as to the importance of the matters that he discussed, both from the point of view of those who desire that our country should provide from its own soil a larger proportion of the food-stuffs which it consumes, and from that of those who regard with apprehension the crowding of the population into the towns, where neither the natural law of supply and demand nor legislation has yet obtained for them anything approaching adequate accommodation. Mr. HAGGARD spoke of the land and its interests as receiving little care from Government because those interests are divided and do not speak with any political voice, and he expressed the belief that now, more than ever in our history, they are vital to the welfare and safety of our nation. Of the physical results to the public health arising out of the flocking of the rural population to cities, where it fails to a large extent to find the comparative prosperity which it seeks, Mr. HAGGARD said: "It means that the character of the race is changing; it means that their physique is deteriorating; it means that fewer men of the best class are available for purposes of national defence ...... it means a new race of city-bred Englishmen the victims *of various diseases which, it is alleged, kill them out within* three generations. We know what country-bred Englishmen have done in the past and the height to which they have lifted their race and nation. Can so much be expected from their descendants if they are to be herded together in the most dismal and airless quarters of our great cities?" In conclusion, he confessed to feeling somewhat "lonesome" in the task which he has imposed upon himself of calling attention to the present position of rural England and its population. We may, however, express the hope that among those who study the results of his labours he will find some who will be struck with the practical possibilities of the remedies that he suggests. Those who acquaint themselves with the working of Sir R. PEARCE EDGCUMBE'S experiments in Dorset, with Major POORE'S experiments in Wiltshire, and with the conditions prevailing at Downham in Cambridgeshire, to all of which Mr. HAGGARD calls attention, may be inspired to effect something similar. Even a Government might be induced to assist upon terms that would make its assistance of practical value, bearing in mind that the difficulties arising from overcrowding in towns, already almost insuperable, may be to some extent diminished in future by anything which keeps the rustic population at home.

A "Plague Goddess" in Bombay.

To us of the West the workings of the Eastern mind are often unfathomable. In the simplest matters, as in the most recondite, it is clear that their ways are not our ways or their thoughts our thoughts. Not only is their point of view different, not only do they accept as facts what we look upon as the baseless fabric of a vision, but even when there are premisses accepted by both different conclusions may be drawn. From Bombay comes a tale exhibiting strikingly the tendencies and fallacies of Eastern thought and showing results which may well appal those who have at heart the extension of our modern hygienic ideas.

For nearly seven years many parts of India have been ravaged by plague and of all large towns affected by it few have suffered more than the city of Bombay. In their tens, their hundreds, nay, in their thousands, the victims of this pestilence have succumbed, but still the plague flourishes. The habits of the people are so opposed to all sanitary laws that no surprise need be felt at the continuance of the disease. Efforts have been made to restrict the spread of the malady and at one time the decree went forth that patients suffering from plague should be taken to isolation hospitals and there tended with all the skill and science that the West can give. The attempt, however, was in vain; the people declined to accept the ostensible reason for the segregation of the sick and various explanations fanciful in the extreme were bruited abroad to account for the anxiety of the Government to take care of those affected. The result was that cases of plague were not reported and that when house-to-house visitations were made the plague-stricken were hidden so that the health officers were often unable to find them. In other cases forcible resistance was offered to the removal of the sick. Thus the plan defeated itself and the Government reluctantly suspended the order for the isolation of those suffering from plague who were left in their airless hovels to spread infection to their crowded families. Still, notification of cases became easier and some attempt could be made to supply medical assistance to the afflicted. There is no epidemic disorder with a higher mortality than plague; the death-rate is generally over 70 per cent. and sometimes even nine-tenths of those attacked may succumb. To the uninstructed native mind a disease with such a heavy mortality can only be looked upon as the direct act of the gods and it can only be satisfactorily treated by incantations and magic rites. Methods like these appeal to them far more readily than the hygiene and medicines of Europe. The fatalism which is so characteristic of uneducated peoples forbids them to entertain for a moment the idea that these epidemics can be prevented by fresh air, pure water, and cleanliness, and their aspirations after miraculous cures make them the easy dupes of self-assertive charlatans. In Bombay towards the end of February of this year a novel form of imposture made its appearance. A woman, some 45 years of age, Bhagirathi by name, announced that she had become "possessed" by the Goddess Maha Kali and she made proclamation that she had seen with grief the seven years' plague which had decimated the city and caused intense and widespread misery. Now, however, a happier era was dawning, for as the incarnation of Maha Kali she had come to save the city of Bombay. To purge the city of the pestilence the Government should give to the poor a maund of rice and "dal." She herself was to ride through the town seated on a buffalo, a "jatra" or fair was to be held in her honour, and for two days all business must be suspended—not even a single train must run. Should, however, the Government disdain to hearken to her counsel the only way in which she could display her divine power was to cure any plague patients taken to her. With what must be supposed to be miraculous foreknowledge she had rented, a few days before she was possessed by the goddess, some land in front of her hut where she built a mandap and she also erected an open shed. A large saffron-coloured flag and band of music served to enhance the attractions. The news of the arrival of this "plague goddess" spread rapidly through the city and it was not long before accounts of marvellous cures which she had wrought were freely circulated, and it is probable that these lost nothing of their miraculous character as they spread. Wonders so great could not be confined to Bombay; they spread to the neighbouring towns and reached even to greater distances. As a result patients were taken to her in great numbers, so large crowds collected to see the "cures" performed. We have no record of the number of patients who at first sought her aid, but during 18 days in March 839 sick persons were taken to her. Of these 667 were cases of plague, but there were also five cases of small-pox and two of measles. The remainder were mainly cases of chronic enlargement of lymphatic glands common in India as elsewhere. The patients were taken in every possible way. Some were well enough to walk even from places far off. Others were carried on the backs of loving relatives or friends, but many arrived in public carriages. The "plague goddess" did not condescend to treat every case taken to her and there were naturally much crowding and pushing as the friends of each patient tried to put him forward for early treatment. No attempt was made by Bhagirathi or her assistants to keep apart the sick and the healthy and the risk of contagion may be imagined.

The mode of treatment adopted is barbarous and revolting. The patient lies stretched out on the ground. Bhagirathi places herself by his side and applies her mouth for many minutes to the enlarged inguinal gland which she sucks vigorously, but the skin is not broken and no blood is drawn. Then the inflamed and tender gland is rubbed energetically with her foot and later with her hands. A betel nut is taken and pressed on the bubo with her foot and then kicked away. Powdered red lead is smeared on the swelling and on the patient's forehead and brushed with a twig and he is made to stand up. The "goddess" deals him three severe blows on the forehead and these are repeated by her assistant, and the patient is sent away after a donation of flowers, fruit, and money has been made. From time to time during the treatment Bhagirathi is seized with convulsions and only the arms of her two attendants save her from falling to the ground. The cases which she prefers to treat are instances of simple chronic glandular enlargement, for the sight of the patient able to walk away sound does much to enhance the popular belief in her superhuman powers of treating plague. When a case of true plague, however, is treated the results are disastrous. In one case examined by the executive health officer of Bombay the bubonic swelling had extended by the next morning to six inches around the gland and a cellulitis had evidently been set up. The massage cannot but serve to hasten the passage of the plague bacilli from the lymphatics into the blood stream and the chance of recovery must be materially diminished. Some true plague patients went on foot and since any exertion during this disease is very dangerous it is not surprising that some of these fell down dead near the hut of Bhagirathi. Within one month 23 persons died thus close to the temple of the "goddess." So much for the harm done to the patient himself, but what about the harm to others? The opportunities for the spread of the disease are numerous, the gathering together of crowds in times of epidemics is always to be deprecated, and especially harmful is it to associate large numbers of the plague-stricken with many not yet affected by the disease. Moreover, as we have seen, patients with other infectious disorders such as small-pox and measles are liable to be taken for treatment and thus these diseases also are likely to be spread. The employment of public carriages, too, for the conveyance of patients cannot but be dangerous and many were thus employed, for in 19 days 326 public carriages were seen to take patients to BHAGIRATHI. The whole neighbourhood also ran risks of infection, for statistics have shown that the number of cases of plague occurring in the district where the "goddess" resided showed a very marked increase after her miraculous cures had commenced. Attempts were made to put an end to these barbarous practices. Under the Municipal Act the health authorities apparently have no power and therefore they gave information to the police. BHAGIRATHI was brought before the second presidency magistrate, and evidence was adduced that her mode of treatment and the crowds to which it gave rise were calculated to spread widely plague and other infectious diseases. The magistrate, however, dismissed the case as he held that the "goddess" could not know that plague was infectious, since she had not contracted the disease in spite of being brought into close contact with affected persons. Also the magistrate could not see that bringing large crowds of persons together, the sick with the healthy, was liable to spread the disease. By this amazing decision the "plague goddess" and her abettors were permitted to continue their dissemination of the plague. We are, it is true, not aware of the exact channel by which the plague bacillus gains entrance into the body, but of its communicability there can be no doubt. Two courses were then open to the police. An application might be made to the High Court for revision of the case, but this was a cumbrous and dilatory method of procedure and ultimately it might not be successful, and meanwhile the evil would continue. The other course was a direct appeal to the Government through the municipal commissioner of the city of Bombay. This was done and the Government resolved that the police should again prosecute BHAGIRATHI and her assistants. Fortunately the case was heard in the court of the chief presidency magistrate and the woman was convicted and fined 100 rupees and an injunction was granted restraining her from continuing her "cures," but these procedures took a month to complete and during this time hundreds of plague patients went to her for treatment.

We congratulate Dr. J. A. TURNER, the executive health officer, and also Dr. S. C. HORMUSJI, the divisional health officer, and the other officials concerned on the ultimate success of their efforts; but the whole matter shows the lack of wisdom in attempting to deal with uneducated populations, especially in times of epidemics, by means of the elaborate and cumbrous legal machinery which may be suitable to more highly civilised states of society. The folly of the magistrate who first heard the case needs no further comment from us

Annotations.

"Ne quid nimis."

ST. BARTHOLOMEW'S HOSPITAL.

THE Lord Mayor's committee of inquiry into the affairs of St. Bartholomew's Hospital met on May 5th at the Mansion House under the presidency of the Lord Mayor. The report of the subcommittee on administration and finance was discussed, the conclusions of the report being summarised as follows:—

> [illegible]
>
> further loss of income.

After discussion of the report the following motion was unanimously agreed to:

> That this committee, having carefully considered the report of the subcommittee on the financial and administrative management of the hospital [which is summarised in the "conclusions" given below] are of opinion that the governors have [illegible]
>
> ing the hospital up to modern

All the friends, and they are many, of the oldest hospital in the United Kingdom will be glad to see that the committee is of opinion that the "reputation, character, and administration of the hospital" have been completely vindicated, but possibly everyone will not agree with the recommendation that the public should be appealed to. A public appeal would probably divert a certain amount of money from other deserving charities and we ourselves have said in a former issue[1]: "It seems to us better for the public that St. Bartholomew's should temporarily bear the burden of a debt to the bank than that supplies which are the very life blood of other charities should be jeopardised." The hospital, however, is at present a City institution, although it benefits the country at large. It was originally served by a religious house and its revenues came out of money given to the Church, which was mostly taken away from the Church by Henry VIII. at the Dissolution of the religious houses. We think that an appeal might well be made to the heads of those great families whose founders received Church lands.

THE MIDWIVES ACT AND THE TEACHING OF OBSTETRICS.

IN his introductory address to a course of lectures on Obstetrics at the Owens College, Manchester, Dr. W. Japp Sinclair made several references to the Midwives Act and to the work which lies before the Central Midwives Board of which he is a member. The Act, it will be remembered, only came into force on April 1st and the board has consequently not yet had time to complete the large body of rules, the making of which may be said to form its first duty, and these when framed by the board have to be approved by the Privy Council which is to consider any representations made with regard to them by the General Medical Council. Dr. Japp Sinclair was therefore precluded from speaking in detail of the work done and to be done by the board, but he was able to forecast in general terms the changes which the Act might be expected to bring about. With regard to the midwives themselves he looked to the Act as destined ultimately to abolish the "Gamp" throughout the country, removing the practice of midwifery from the hands of "the illiterate widow, the elderly housemaid, the innominate drudge of country districts," and placing it so far as it is to be practised by persons not members of the medical profession in the hands of those who, he submitted, should not be altogether illiterate. For example, he suggested that the certified midwife should be able to read a manual, to write a report of a case, and to have such acquaintance with the rule of three as to enable her to prepare an antiseptic solution or to dilute a baby's milk in the same degree on two successive occasions. The Act itself Dr. Japp Sinclair evidently looked upon as far from perfect although capable of amendment and improvement, but he expressed the belief that the changes brought about by it might in the future be found to exercise considerable influence upon the teaching of obstetrics in medical schools. In considering the course of training generally adopted in this country for this branch of medical study he drew unfavourable comparisons between English practices and the superior efficiency which he claimed for German methods. The Midwives Act is beyond question a measure which leaves to the board which it has brought into being a very wide discretion in the framing of the regulations by which alone the Act will become effective and many will study these with interest besides the class directly concerned in them. Although we have referred to the Act as having come into force on April 1st our readers are aware that that date only marked the commencement of the powers of the board the most immediate duty of which, as we have pointed out, consists in the framing of rules. It is not until April 1st, 1905, that a midwife not certified under the Act is precluded from taking or using the title of midwife or any name implying that she is certified under the Act and consequently there is no immediate urgency for the certification and registration of those who are permitted by the Act to be certified without being examined under the regulations of the Central Midwives Board. They have to comply with the necessary formalities in the course of two years from the date of the Act coming into operation but are not obliged to do so before. It is not until April 1st, 1910, that every woman practising as a midwife will have to be certified. As, however, the women who may desire admission to the roll of midwives by means of the training and examinations to be imposed by the board will require time in which to prepare themselves that body is no doubt proceeding as rapidly as circumstances will permit with the framing of the necessary regulations.

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[1] THE LANCET, Jan. 17th, 1903, p. 181.

INTERFERENCE WITH A MEDICAL WITNESS.

AT an inquest held at Acton on May 5th upon the body of a clergyman who had been found in his bedroom shot dead with a revolver lying near him a medical witness made a complaint to the coroner of a nature which is happily unusual. Mr. D. M. L. Campbell, after giving his evidence, asked the coroner whether it was right that a medical man summoned to give evidence at an inquest should be visited two or three times with reference to what he might be about to say and should receive a letter or letters suggesting that his examination of the body had not been careful and that he should make another. It was further suggested to him that a clergyman would not commit suicide. The coroner very properly and very naturally expressed his strong disapproval of what had been done and refused to listen to an explanation which was tendered, no denial of the accuracy of Mr. Campbell's statement being made. The coroner's observations can hardly have been too severe for the occasion. Mr. Campbell pointed out that to him, as he had been personally acquainted with the deceased, the task of making the examination and giving evidence had been exceptionally sad. In any case, a medical practitioner in such circumstances has thrust upon him a painful duty incidental to the practice of his profession and he is entitled to the protection of the court before which he appears. Mr. Campbell, according to the report of the inquest in the *Acton Gazette*, said: "When I was called I went into the room and the body was lying supine. He was lying on his back with his head inclined a little to the right side. The legs were straight out and the little and index fingers of the right hand were resting on the floor, whilst the revolver was in the position in which it had been grasped, although it appeared to have slipped from the grasp. There was a wound behind the right ear. The direction of the wound was forward and onward." In answer to direct questions from the coroner he gave the opinion that the wound was self-inflicted and that it could not have been accidental. He also added that the hair was singed. There may be a slight error in the report quoted as to the course taken by the bullet, but this does not affect our view of Mr. Campbell's position. It will be perfectly clear that the medical witness who observes facts such as these is obliged to include them in his evidence and is entitled to draw the deductions recorded. It was open to the relatives and friends of the deceased through their legal representative to cross-examine Mr. Campbell and this they did propounding a theory of an unintentional discharge while the deceased was cleaning the revolver and supporting their theory with evidence, apparently to the satisfaction of the jury who found a verdict of "Accidental death." That they should have taken the other course of seeking to influence Mr. Campbell in his evidence is a matter which they should now regret. A medical witness called at an inquest is a member of an honourable profession, occupying a position which renders him independent of all prejudice. He is summoned to give evidence as to facts observed by him and to express opinions which his training and experience enable him to form. The jury is not bound to adopt his view in their verdict, but he is not to be interfered with in expressing it without fear or favour.

THE PATHOLOGY OF GASTRIC ULCER.

MANY theories have been proposed to explain the origin of true gastric ulcer which was first distinguished as an affection *sui generis* by Cruveilhier. Some have attributed it to the action of the gastric juice, some to disturbances of the circulation such as are seen in thrombosis and in septic and aseptic embolia, and others again to the attacks of micro-organisms; but in 1874 Dr. Durante, recognising its affinity with the "*mal perforant*" of the foot, pointed out that in both instances the tissues affected were predisposed to disease in consequence of deep-seated disturbance of the nerves distributed to them. The subject has again been taken up by Dr. R. Dalla Vedova of Rome who has endeavoured to determine, by means of resection of the vagi and of the solar plexus (from which sources the stomach receives its nervous supply) or by the injection into these structures of an aseptic fluid such as concentrated alcohol, the effects of the suppression of nervous influence upon the nutrition of the stomach. He found that about half of all the animals operated on exhibited distinct changes in the gastric mucous membrane. This effect was not due to the toxic action of the alcohol causing acute septic peritonitis without any characteristic microscopic inflammatory changes, for no less than two-thirds of the animals survived for ten days; nor was it due to exposure of the intestines to cold or to any mechanical injury to the parts, since these were not, and need not be, touched in extirpation of the cœliac plexus. Dr. Dalla Vedova considers himself to be justified, from a careful consideration of all the circumstances, in drawing the conclusion that the necrotic ulcers of the gastric walls observed in his experiments were directly due to the lesions inflicted on the abdominal sympathetic. The ulcerative processes were noticed to affect chiefly the antrum pylori, and many drawings accompany Dr. Dalla Vedova's article showing the position of the ulcers, hæmorrhages, spots of necrosis, and cicatrices of ulcers that were seen after the death of the animals. This position of the ulcers he attributes in part to the more highly acid reaction of this segment of the stomach and in part to the constant irritation of the several tunics debilitated by the loss of their nervous supply owing to the passage over them of the more solid parts of the chyme in the later stages of digestion.

The size of the necrotic spots varied from that of a pin's head to that of a lentil, they were more or less circular and they were elevated on an œdematous and hyperæmic area. The hæmorrhages were small and varied in colour from yellow to blackish brown and the ulcers were funnel shaped, extending through the whole thickness of the mucous membrane, the base being formed by the muscular coat Their borders were fairly well defined and on the depressed surface was some necrotic detritus A German translation of Dr Dalla Vedova's original article, which was contained in the report of the sixteenth annual meeting of the Società Italiana di Chirurgia which was held at Rome in 1900 has recently appeared in the *Archiv fur Verdauungs Krankheiten*, Band viii, Hefte 3, 4, and 5

THE KING'S SANATORIUM

A SITE for "King's Edward VII's Sanatorium' has been acquired from Lord Egmont at Lord's Common, Easebourne, six miles south of Haslemere and about three from Midhurst. The site is 150 acres in extent and contains in its northern and eastern portions a magnificent fir wood Towards the south and sheltered by the wood is a natural open plateau over 450 feet above sea level and commanding in the distance a beautiful view of the South Downs Upon this the sanatorium will be erected Behind the ground gradually rises until at the northern extremity of the property a height of 620 feet is attained Complete shelter from north and east winds is thus secured To the west and immediately adjoining the site is an open common of considerable extent, which will add materially to the usefulness of the institution The lower greensand is the geological formation. A delay in acquiring the site was occasioned by the difficulty experienced in obtaining a due supply of water, but by impounding springs about a mile away to the north of the site this difficulty has been overcome and an abundant supply of water of great organic purity, as tested both bacteriologically and chemically, has now been obtained Mr H Percy Adams, F R I B A, the architect appointed by the advisory committee who has recently by its direction made a very careful study of sanatoriums both in Germany and Switzerland, is now preparing his plans

PUBLIC HEALTH LITERATURE

IN another place we publish under the heading of "The Aerial Convection of Small-pox' a letter from Professor Antony Roche, and certain points raised in that communication have a general interest for the public health services As regards the literature relating to the aerial convection of small pox, we venture to think that there will be found in the numbers of THE LANCET, either in editorial articles or in our abstracts of the annual reports of medical officers of health, references to most of the literature which is really of importance Moreover, the reports of societies dealing with public health and epidemiology will also be found in our columns But the main point in the communication under consideration is the suggestion that the Local Government Board should publish annually a *résumé* of the reports furnished by the medical officers of health throughout the country Apparently, a suggestion in this sense was made to the late Sir Richard Thorne whose only objection to the course was the expense which it would entail, more particularly if a copy of such a publication were to be sent to every medical officer of health in the country Although it does not appear to us that a *résumé* of all the reports is called for, seeing that but a small proportion thereof contain matter of any interest to those outside the district concerned, we quite agree that a useful purpose might be served if the Local Government Board could be induced to publish annually a volume of the more interesting points contained in the reports of medical officers of health Possibly a deputation to Mr Long might assist this matter But what we think is of at least equal importance is that the annual reports of the medical officer of the Local Government Board, which contain not only selected reports by the medical inspectors but also the records of valuable bacteriological and chemical research, should be made more accessible to medical officers of health Unfortunately, the price of these volumes is somewhat prohibitive but if they could be presented to medical officers of health or supplied to them at a reduced price a very material service would be rendered to the public health service It would be well in the event of Professor Roche's suggestion being carried out that the annual volume which it is proposed to establish should contain selections not only from English public health literature but also from the reports relating to the more important foreign cities But public health literature, more especially if it be held to embrace bacteriology, covers in these days a very wide field and the volume in question would be likely to run to very bulky proportions As regards the reports of the medical inspectors of the Local Government Board, Professor Roche will find notices thereof from time to time in our columns and all these reports can be purchased for a few pence from the Government publishers, Messrs Eyre and Spottiswoode Unfortunately, the annual reports of medical officers of health cannot, as a rule, be so purchased, but there would seem to be no sufficient reason why this should not be arranged for in the future

THE PUBLIC SALE OF INDELICATE PRINTS AND OFFENSIVE LITERATURE.

A PICTURE that looks well and can be properly appreciated in the hallowed precincts of an academy may not look so well or refined when reproduced in the form of a cheap engraving and sold openly in the public streets We have noticed for some time past that at regular periods in the streets of the city there seem to be epidemics of the sale of bad literature and suggestive prints, and only this week we saw reproductions about two feet long of a well known picture which is a study of the nude being openly offered for sale at a penny each not a mile from the Stock Exchange We are afraid that in many cases the purchaser, who may be a small boy with a penny to spare, is not likely to possess that subtle discrimination generally only the outcome of a mature mind and refined nature, which appreciates only the artistic beauties of such a picture and rejects all grossness Again, pamphlets are often sold in the city streets either really obscene or professing to be so and often possessing an alluring cover as a bait to entice purchasers to taste of the carrion within The gutter merchants who sell such noxious wares should receive attention from the police

OPERATION FOR EXTRA-DURAL HÆMORRHAGE FROM WHOOPING-COUGH

IN the *New York Medical Journal* of April 25th Dr G S Brown has published a case which is not only important as a contribution to the scanty literature of the cerebral complications of whooping cough but also appears to be unique in the fact that an operation was performed for cerebral hæmorrhage from this disease A healthy boy, aged seven years, had whooping-cough The paroxysms were pronounced but not severe After four weeks he complained of pain in the head and became irritable. On the next day, when Dr Brown first saw him, he was suffering intensely from pain in the right temple "The pain was so severe as to suggest rupture of a vessel, particularly as there was sufficient somnolence to arouse suspicion." On the following morning at 3 o'clock he was in great pain, somnolent, and semi-delirious with a slow pulse, a temperature of 103° F., and complete paralysis of the left arm. A hypodermic injection of morphine gave some relief until 10 A.M., when another was given. At 3 P.M. he had a slight convulsion; at 9 P.M. the somnolence had increased. The pain was agonising and was much increased by the attacks of coughing, for which one-twelfth of a grain of heroin hydrochloride was given every four hours. The question of operation was considered but postponed in consequence of lack of precedent. Although almost narcotised from the heroin he had a severe left-sided convulsion at midnight which was followed within an hour by two more, each more prolonged and severe than the last. As his condition was alarming and as it seemed clear that a clot was pressing on the right motor area of the cortex he was trephined an inch above, and in front of, the parietal eminence. The opening in the skull was extended towards the middle of the Rolandic area and the dura mater was opened but nothing could be found. The child's condition was not favourable to further search and it was hoped that the opening would relieve the pressure. On the next day all the symptoms except the paralysis had improved, but 48 hours after the operation there were three convulsions in quick succession. The patient was trephined again nearer the median line. The dura mater was opened to the extent of an inch but nothing could be found. It was immediately sutured. Upon cutting away a piece of bone from the trephine opening a clot was found. Owing to its small size it was thought at first that the clot might have been a result of the first operation, but an hour after its removal the patient moved his arm and the limb was as strong as ever two days later. Recovery was uninterrupted. The hæmorrhage was extra-dural and was supposed to come from the middle meningeal artery.

THE PREVALENCE OF SMALL-POX.

Small-pox shows but little sign of decreasing. Last week the number of cases at Salford showed a decided rise and it continues to spread in the West Riding. In Dublin there is a great tendency to conceal the existence of cases and this renders the work of the health authorities very arduous. In London on Friday, May 8th, there were 57 cases of small-pox in the hospitals of the Metropolitan Asylums Board, as compared with 44 a week previously. At a meeting of the Poplar borough council held on May 7th the following case was reported by the medical officer of health, Mr. F. W. Alexander:—

> A male, aged 32 years, was detained at a surgery in the Roman-road and removed suffering from small-pox on April 20th. (See footnote.) The patient, apparently in good health, had returned home from a hospital in Bath on the 9th inst., where he had been an inmate for five weeks. On the 15th inst. he became ill, rash appeared on the 17th inst., and as stated above was removed on the 20th inst., so that he had been lying at home for six days suffering from small-pox. In the same house living with him were his wife, a daughter aged 16 years, and six unvaccinated children. These children had been playing in the streets with other children and neighbours had been going in and out of the house. Information was also given that a child, aged 18 months, on the 18th inst. was sent from Ford-road to Ellesmere-road, Bethnal-green; notice was at once given to the Bethnal-green authorities. All the inmates have been removed to the Council's shelter, Glaucus-street, and the house will be cleansed and disinfected throughout. The mother requested that the six unvaccinated children should be vaccinated. The public vaccinator was communicated with, but it is questionable whether vaccination will be of any use, as the children had been exposed to infection for six days. Another child, aged eight years, unvaccinated (making seven in all) was brought into the shelter on the 21st inst. from Chisendale-road; he had been taken there on the 20th inst. The medical officer of Bethnal Green was communicated with. It was evident to the medical officer of health that the disease must have been contracted out of the district, and thinking that in the institution at Bath from which the patient was discharged there may be other inmates with the premonitory symptoms of small-pox, the medical officer telephoned through to the institution at Bath, and was informed that two cases of small-pox had been removed on the 16th inst. and others since. If the telephone answer received be correct it is a pity that the authorities of the institution at Bath did not communicate with all the local authorities to which patients had been discharged within the 14 days previous to the 16th April, then the patient at Ford-road would have been discovered on the 17th inst., and chances of the spread of the disease lessened.
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> Footnote.—From information since received the small-pox patient went to the London Hospital, was placed in an isolation ward pending making inquiries, as he was seen to have small-pox, and arrangements were about to be made for his removal but he made his escape.

We are glad to see that the borough council warmly commended Mr. Alexander for the prompt way in which he had dealt with this case. Mr. Alexander now informs us that already nine other cases of small-pox have been traced to this patient, so we earnestly hope that when he is recovered the sanitary authorities will prosecute him for exposing himself while suffering from a dangerous infectious disease.

RESIGNATION OF DR. POORE.

We regret to announce that Dr. G. V. Poore, Professor of Clinical Medicine in University College, London, and physician to University College Hospital, has found it necessary to resign his appointments in consequence of ill-health. Dr. Poore's brilliant work as a physician and a practical sanitarian is well known to all our readers and he has well earned by 35 years of able and unceasing toil the good wishes of all his profession. Now that he is relieved from heavy official duties the loss of University College will be the gain of his patients and their medical advisers, as he will be able to give more time to his private work.

GANGRENOUS CHOLECYSTITIS.

In the *American Journal of the Medical Sciences* for April Dr. John H. Gibbon has published a case of the very rare condition of gangrenous cholecystitis. A woman, aged 52 years, was admitted to hospital on Oct. 3rd, 1902. She had suffered from frequent attacks of indigestion, accompanied by nausea and vomiting. Her illness began three days before admission with pain in the left hypochondrium and vomiting. On he evening of admission the temperature was 102° F., the pulse was 112, and the respirations were 32. She complained of pain and tenderness in the left side of the abdomen. The abdominal muscles on the right side were rigid and a smooth tumour which seemed to move away from the examining hand could be felt. On the next morning the tenderness and rigidity had so much increased that the tumour could not be palpated. The leucocytes were 37,600 per cubic millimetre. Immediate operation was decided on. When the abdominal muscles relaxed under the anæsthetic it was easy to diagnose a distended gall-bladder. An incision was made over it. When the abdomen was opened some free fluid escaped. The gall-bladder was covered by adherent omentum. When this was removed the gall-bladder was found to be distended and its fundus of a dark purple colour. A number of abdominal pads were inserted, the gall-bladder was incised, and very foul pus was evacuated. The mucous membrane was green and gangrenous throughout. A large calculus was fixed at the mouth of the cystic duct. The fundus was gangrenous throughout all its coats and between it and the rest of the gall-bladder was a clear line of demarcation. The fundal portion was thin but the rest of the organ was much thickened, measuring from half an inch to one inch in thickness. It was decided to remove the gall-bladder. Its separation from the liver was easily accomplished with the finger, the tissues being soft from infiltration. When an attempt was made to ligature the cystic duct the gall-bladder separated and came away even before the first knot was tied. The cystic artery bled freely and could not be controlled by a pressure forceps as the instrument cut through the inflamed tissues. The hæmorrhage was arrested by gauze packing. Gauze drains were inserted and the wound was partially closed. The patient was very ill after the operation but on the next day she was better. Convalescence was uninterrupted and the wound healed rapidly. The leucocyte count on the morning of operation was 37,600; on the next day it had dropped to 12,600. Gangrenous cholecystitis probably depends on two factors—obstruction of the cystic duct and infection by virulent microbes; whether either alone can produce it cannot be said, since in all cases microbes and some obstruction, if only that from swollen mucous membrane, are present. Of course gangrene does not take place until the circulation is obstructed. Gangrenous cholecystitis is analogous to the much more common gangrenous appendicitis. The gangrene in the present case depended on impaction of the calculus cutting off the circulation. The symptoms are those of acute localised peritonitis. Jaundice is generally absent, unless there is marked cholangitis or the inflammation has extended to the liver. Gangrenous cholecystitis is liable to be mistaken for appendicitis, but under anæsthesia the two conditions can usually be differentiated. In both cases immediate operation is indicated and a gangrenous gall-bladder, like a gangrenous appendix, should be excised. Dr. Gibbon agrees with the advice of Mayo that the cystic duct should not be ligatured and is glad that his attempt to ligature it failed, for there is always some cholangitis which will be relieved by drainage.

THE HATCHING OF CHICKENS FROM EGGS TWELVE MONTHS OLD.

We have more than once directed the attention of our readers to the remarkable preserving properties of soluble glass or silicate of soda and it is surprising that this solution is not used more generally for the preservation of eggs. It is confidently stated that a newly laid egg will keep for many months when completely immersed in a 10 per cent. solution of the silicate and will then be indistinguishable as regards appearance and taste from an absolutely fresh egg. It shows the flakiness of the fresh egg and there are no signs of staleness whatever or of any disagreeable property which commonly characterises the "shop 'un." We have ventured to give an explanation of this remarkable preserving effect by assuming that the soluble silicate forms a hard, glassy, impermeable mass with the lime salts in the substance of the shell, a real insoluble glass, so that the contents are literally hermetically sealed against external influences. That is a remarkable enough fact, but it is now reported that chickens have been hatched from eggs preserved for 12 months in this way. This extraordinary result shows that not only are chemical changes prevented but that also the conditions of the vital processes in the egg remain unimpaired. The chicken thus hatched from a twelve-month-old egg is reported to be a quite strong and attractive bird. The recently reported success of this method, by which life would appear to be suspended so to speak, would seem to open up many possibilities in regard to the transportation and supply of food.

THE JOHNSTON LABORATORIES AT UNIVERSITY COLLEGE, LIVERPOOL.

The account given by our correspondent which appears at p. 1412 of the opening of the Johnston laboratories at University College, Liverpool, is of special interest inasmuch as the opening ceremony was performed by a Minister and that Minister the one who holds the very important post of President of the Local Government Board—namely, the Right Hon. Mr. Walter Long, M.P. We do not for one moment think that Mr. Long's presence pledged his colleagues in the Government to any course of action but we cannot help hoping that the fact is of good omen for a forthcoming Act which shall deal with the question of revaccination. Mr. Long, it will be seen by a reference to his speech, confessed that the object of his department was to impose regulations for restricting the spread of disease whilst interfering as little as possible with trade. Now, no one can say that vaccination interferes with trade. Meantime, we heartily congratulate Liverpool upon such a worthy citizen as Mr. William Johnston. Of old time the merchant princes of Europe gave funds or left moneys to drain fens or to build dykes or to found hospitals or religious houses for the purpose of looking after the sick and the needy. Bio-chemistry may not seem such a practical work but it is nevertheless no less valuable for the prevention of disease and the improving of the health of the people.

PUBLIC SUPPLIES OF MILK FOR INFANTS.

Medical men who practise in working-class districts are well aware that when mothers do not suckle their infants they have very vague ideas as to the selection and preparation of cow's milk or other substitutes for breast milk. In some large towns the difficulty has been partly met by some public body undertaking the supply of sterilised or sterilised and "humanised" milk for infants. This system was introduced, for instance, in St Helens, Lancashire, some years ago. A letter which appears on p. 1402 of our present issue is encouraging to the philanthropists who are in favour of this innovation, as it shows that the Royal Hospital for Children and Women in Waterloo Bridge-road is promoting a petition in this sense to the borough council of Lambeth. We understand that Battersea is the only metropolitan borough which has up to the present time undertaken this duty. Like most other questions, that of the public supply of milk for infants has two sides and an abstract of a paper on the subject read before the International Congress of Medicine at Madrid by Dr. A. L. Peyreux of Paris will be found on p. 1410 of our present issue. This gentleman disapproves of the indiscriminate supply of milk in this way on the ground that it tends to discourage the breast-feeding of infants.

VACCINATION, REVACCINATION, AND THE ADMINISTRATION OF THE VACCINATION ACT.

In view of the lapse at the end of the present year of the Vaccination Act now in force the medical officer of health of Huddersfield, Dr. S G. Moore, pursuant to a resolution of his health committee, attended a meeting of the Incorporated Society of Medical Officers of Health held in London on Feb. 11th, where the above subjects were discussed. At the meeting of the Huddersfield health committee held on March 25th a communication dealing with the same matters was received from the Royal Institute of Public Health and was referred to the medical officer of health for report. Dr. Moore has now submitted a memorandum to the health committee in which, shortly to summarise, he suggests, firstly, that the administration of the Vaccination Acts should be taken out of the hands of the Poor-law authorities; secondly, that vaccine lymph other than that supplied by the Local Government Board should be prepared and distributed under the supervision of local sanitary authorities; and, thirdly, that provision should be made for revaccination both general at the age of ten or 12 years, and special—i.e., in the case of persons recently exposed to infection; this last at least to be compulsory. Dr. Moore concludes by stating that the present is an opportune time to impress on the Government the necessity for improving the measures available against small-pox. He hopes that his recommendations will be received by the committee and the council and will be transmitted to the Local Government Board as representing the views of the latter. Further he requests the committee to take into consideration the advisability of securing the coöperation of other towns in the north of England. Dr. Moore's recommendations are good, but the Government has already played the medical profession false as regards revaccination, and we doubt whether polite resolutions from one or 50 town councils will weigh with the Government so much as a few words from General Phelps or Mr. Broadhurst Mr. Walter Long, however, is a Minister from whom much may be expected and if he will only take up the firm attitude upon vaccination which he took upon hydrophobia all may yet go well.

GUY'S HOSPITAL.

THE report of Guy's Hospital for the year 1902 states that on Dec. 31st of that year there were urgently required £85,000 to complete the renovation and building fund and to provide additional income for the purposes of maintenance. Moreover, the medical school requires for the "endowment of medical education and research," the sum of £125,000. The total income arising from investments is in round numbers £32,370 and the total expenditure in the same way is £90,720. The difference between these two sums is made up by grants from King Edward's Hospital Fund, the Sunday and Saturday Hospital Funds, and by transfers from the sustentation fund and from capital account. Elsewhere we have recorded the fact that another great metropolitan hospital is about to appeal for funds. Guy's Hospital for 160 years performed a great public work without public aid. St. Bartholomew's Hospital has done the same thing for 780 years. Both hospitals have a noble record and both, it is certain, will make a good use of whatever moneys they may procure, but even the purse of charity is not bottomless and the risk that other and more needy institutions may be injured by the answer to the appeals from Guy's and from St. Bartholomew's Hospitals has to be faced.

THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

THE American Electro-Therapeutic Association has issued its report for the year 1902–03, which is prefaced by an interesting historical sketch of the inception and progress of the society. It was founded in 1891 and the first annual meeting was held at Philadelphia. The association would appear to be doing good work in the reading of papers and in the appointment of standing committees on various forms of electric and electro-therapeutic apparatus. Electro-therapeutics have been so exploited by quacks and swindlers that we are always glad to see this branch of medicine dealt with by a scientific society. We do not see any mention in the by-laws or other regulations of the society that it concerns itself with the doings of quacks, an omission which we hope will be rectified in future, for we have no doubt that if strong protests were to be made to the authorities by duly authorised representatives of the profession the dens of thieves who sell "magnetic invigorators" and the like would be weeded out. We are quite aware that we in this country are by no means blameless or free from these pests and possibly the time will come when the medical profession on both sides of the Atlantic will unite in doing its utmost to put down one at least of the many forms of quackery which rob the pockets and sap the health of their victims.

THE DISTRIBUTION OF PLAGUE.

As regards the Cape Colony the acting medical officer of health states that for the week ending April 18th the condition of the various places mentioned below was as follows:—At the quarantine station, Saldanha Bay, 2 Asiatic males remained under treatment in the hospital, both being convalescent. At Port Elizabeth 7 cases of plague were discovered—namely, 1 native male, on April 12th; 1 native male (found dead) on the 13th; 2 native males (1 of whom was found dead) and 1 native female on the 15th; 1 European male and 1 native male (found dead) on the 18th. At the plague hospital, Port Elizabeth, 1 coloured male and 1 native male died during the week, while 1 coloured female was discharged cured, leaving 17 cases under treatment. Plague-infected rats continued to be found in the town during the week. At East London on April 14th a native male was admitted to hospital suffering from plague and died on the 17th. 1 native male was discharged cured during the week, leaving 1 case under treatment at the plague hospital. Plague-infected rats continued to be found in the town during the week. At King William's Town 2 cases of plague were discovered—namely, 1 native male (found dead) on April 16th, and 1 native male (found dead) on the 18th. At the plague hospital 1 European male died and 2 European males were discharged cured, leaving 1 patient under treatment No cases of plague and no plague-infected rats were found in Graaff-Reinet during the week. As regards the Mauritius a telegram from the Governor received at the Colonial Office on May 8th states that for the week ending May 7th there was 1 fatal case of plague.

MYOPIA IN DIABETES MELLITUS.

IT was first demonstrated by Hirschberg that in the course of diabetes mellitus some degree of myopia occasionally develops in eyes previously emmetropic or hypermetropic, without turbidity of the lens or cataract. Dr. Sigmund Neuburger of Nuremberg in the *Munchener Medicinische Wochenschrift*, No. 12, 1903, records two examples of this diabetic myopia which he had an opportunity of observing. and in both of which the ocular condition led to the discovery of the diabetes. The patients were women, aged about 50 years, whom Dr. Neuburger had known previously to the development of the myopia, one having been emmetropic and the other slightly hypermetropic. In the first case the myopia soon passed off and no other ocular signs developed except slight change in the macular region of the right eye, although the other diabetic symptoms increased. In the second case, on the other hand, the myopia increased, reaching a degree of – 8 D., and at a later period diabetic cataract developed. The explanation given of this change is that it is due to an alteration in the refractive index of the lens substance induced by the diabetes. This explanation, however, seems hardly convincing as it is difficult to see, on the one hand, why the change is not more common if it depends upon the altered condition of the circulating fluids in diabetes, and, on the other, why the condition can pass off while the diabetic changes elsewhere are increasing. It may, however, be of importance in the early diagnosis of diabetes by leading to an examination of the urine for sugar, which, according to Dr. Neuburger, should be done in all cases of myopia beginning in middle age.

ANTHROPOMETRICS IN SALFORD.

IN THE LANCET of March 28th, p. 926, attention was drawn to an interesting and important inquiry that was being carried out in three of the Salford board schools as to the physical characteristics of the boys at various ages. It was decided at the meeting of the school board held on April 27th that the subcommittee in charge of the matter should be authorised to take anthropometric measurements of boys at the ages of eight, ten, and 13 years in *all* the boys' and mixed departments of the board schools. This decision is satisfactory, for though measuring the boys will not of itself do much to improve their physique it is well that the facts should be known. If no interest is felt as to whether our urban lads grow up weakly or strong no attempts will be made to improve the conditions under which they live. It may be remembered that the Grecian-street school stood well as compared with one in Pendleton, but it appears from the returns that the Grecian-street boy is a little less in height and in weight than the London board school boy and three inches less in height than the average public school boy of his age and nine pounds less in weight. Taking the John-street school type—the worst of the three—the boy aged 13 years was seven inches shorter and 25 pounds less in weight than the public school boy. "The Salford boy, he thought," said the Rev. Mr. Rees, "was physically punier than other boys and rivalled the boy of Rochdale." This statement is not encouraging for Salford and still less so for Rochdale. It is a national calamity that so large a proportion of our population are growing up puny weaklings and the result may some day be disastrous. The contrast would be pitiful if these town-dwellers were put side by side with some of the well-grown and magnificently proportioned men and women to be seen on the Lancashire Fells.

TUBERCULOUS PERICARDITIS.

TUBERCULOSIS of the pericardium is a rare condition though it is probable that it is sometimes not recognised even at a post-mortem examination when the pericardial adhesions present are thought to be due to some other cause. Dr. Osler has given in the *American Journal of the Medical Sciences* a clinical classification of cases of the disease. He divides them into four groups. In the first the disease shows no distinctive sign and the condition is only found at the necropsy. This occurs chiefly in cases where the pericarditis is secondary to tuberculosis of the lungs. In the second class are cases in which the adherent pericardium present gives rise to symptoms of cardiac embarrassment; in the third group are cases with evidence of pericardial effusion, but the cause of the effusion may be unsuspected, and in the last group are cases of acute general tuberculosis, and the pericardium only suffers with many other organs. Primary tuberculous pericarditis is much less common than the secondary form, which chiefly results as an extension from tuberculosis of the lungs or it may occur in an acute form as the result of the bursting of a caseating bronchial gland. In the present issue of THE LANCET is an account by Dr. J. Odery Symes of Bristol of an interesting case of tuberculous pericarditis occurring secondarily to disease of the lung; there was much pericardial effusion and repeated aspiration was necessary. The tuberculous nature of the pericarditis was made certain by the presence of tubercle bacilli in the fluid.

THE King has sanctioned the following appointments to the Order of the Hospital of St. John of Jerusalem of England: Sir Arthur Conan Doyle, Lieutenant-Colonel Edmond Munkhouse Wilson, C.B., C.M.G., D.S.O., R.A.M.C., Surgeon-General Alfred Keogh, C.B., and Lieutenant-Colonel William Babtie, C.M.G., V.C., R.A.M.C., to be Knights of Grace.

THE Ingleby Lectures of the University of Birmingham will be delivered in the medical lecture theatre of the university on Tuesdays, June 9th and 16th, at 4 P.M. The Ingleby lecturer for the year is Mr. William F. Haslam, F.R.C.S. Eng., surgeon to the General Hospital, Birmingham, and the subject of his lectures will be "The Surgery of the Pancreas."

THE dinner of the Sanitary Institute will be held in the Richelieu and Medici Rooms at the Hotel Cecil, London, on Friday, May 15th, at 7.30 P.M., when H.R.H. the Duke of Cambridge, K.G., the President of the institute, will take the chair.

A RECEPTION by their Royal Highnesses the Prince and Princess of Wales, Grand President and Lady Grand President of the League of Mercy, will be held in connexion with the League at Marlborough House on May 22nd.

THE next session of the General Council of Medical Education and Registration will begin on May 21st at 2 P.M., Sir William Turner, K.C.B., the President, being in the chair.

THE annual banquet of the Coroners' Society of England and Wales will be held at the Holborn Restaurant, London, on Thursday, May 28th, at 6.30 for 6.45 P.M.

THE MEDICAL PROFESSION AND THE MERCANTILE MARINE.

Paterson v. the Peninsular and Oriental Steam Navigation Company.

IN July, 1902, Dr. T. W. S. Paterson agreed with the Peninsular and Oriental Steam Navigation Company in London to go as surgeon on one of its steamers from London for one voyage out and home. The ship to which he was appointed was the *Socotra* sailing to Japan. On joining the ship he was requested to sign the ship's articles as prescribed by the Board of Trade. Pasted on to the articles was a printed strip which contained two by-laws of the company. One of the by-laws was worded as follows:—

> That the crew or any member thereof may be transferred if required at any port, at any time, to any other vessel of the company, wages, capacity, and terms of service being the same.

Dr. Paterson took exception to this clause and at first refused to sign the articles, but on being verbally assured that this by-law would not be acted on he signed the articles and joined the ship He was described in the articles as "seaman." By the merchant shipping law a surgeon is considered an ordinary seaman. Upon arriving at Shanghai on the homeward voyage on Oct. 19th, 1902, Dr. Paterson was ordered by the company's agent through the captain to transfer himself to the s.s. *Ballarat*, one of the company's ships plying between Bombay and Shanghai and not going home. He refused to do this. The agent then instructed the captain of the *Socotra* to prosecute the surgeon of the *Socotra* for refusal to obey the lawful orders of the captain. A summons was accordingly issued for the surgeon to appear at H.B.M.'s Police-court, Shanghai, in that he did on Oct. 21st, 1902, refuse to obey the lawful command of the captain of the s.s. *Socotra*. Dr. Paterson tried to obtain legal assistance in Shanghai but failed owing to want of ready money. Fortunately there was a copy of the Merchant Shipping Act of 1894 on board.

On being arraigned before the magistrate the defendant inquired whether he was charged with a civil or a criminal offence. The magistrate replied that "the offence was one in respect of which defendant was liable to imprisonment without hard labour for a term not exceeding four weeks, or in the discretion of the court to a fine not exceeding two days' pay. It was a criminal offence." The defendant, while admitting that he refused to obey the captain's orders, denied that the order was a lawful one and quoted Section 187 of the Act of 1894 which says: "A captain shall not leave or cause to be left behind a seaman in a foreign port." He further pleaded that the by-laws in question were extraneous matter pasted on the articles and quoted Section 122 of the Merchant Shipping Act which says that "the consent of the whole crew must be obtained to any alteration in the ship's articles." He denied that the company had his consent. Finally, if he did sign them, he signed them under protest and had a verbal promise releasing him from this clause in the articles, evidence of which would be forthcoming. The magistrate did not decide the case on the point of fact as to whether or not the defendant had this verbal promise, but on a point of law as to whether the by-laws of the company could override the articles prescribed by the Merchant Shipping Act. He decided that the by-laws could not do so, were in law *ultra vires*, and dismissed the charge.

The *Socotra* left Shanghai for Manilla on the homeward voyage on Oct. 25th. Just before leaving Dr. Paterson was informed by the company's solicitors in Shanghai that the company would appeal from the police-magistrate's decision. Dr. Paterson then instructed a firm of solicitors at Shanghai who on receiving suitable references undertook to represent him; at the same time he instructed his solicitors in London to do all in their power to stop the appeal, with its attendant risks of a criminal conviction. Mr. F. S. A. Bourne, acting Chief Justice of the Supreme Court of North China and Korea, dismissed the appeal with costs. The company then applied for permission to appeal to H.M. Privy Council in London. His lordship granted permission to appeal on condition that the company paid all the costs of the appeal to the Privy Council, including a sum not exceeding £150 for the costs of the respondent in London. On arriving in London in December, 1902, Dr. Paterson found that his solicitors had demanded an apology from the company on his behalf, the cessation of the prosecution in Shanghai, and such costs as he had then incurred. This demand not being complied with and learning by cable that the company had asked for leave to appeal to the Privy Council, Dr. Paterson instructed his solicitors in London to proceed with an action in the High Court, London, against the company, claiming damages for malicious prosecution.

The company filed its defence to this action on Feb. 26th, 1903. It is as follows:—1. The defendant company did not prefer any complaint as alleged. 2. If any complaint was preferred in the name of the defendants the same was preferred without the authority of the defendants. 3. The complaint referred to was not preferred maliciously or without reasonable and probable cause. 4 The defendant company did not serve any such notice of appeal as is referred to. 5. If any such notice of appeal was served it was not served with the authority of the company. 6. Such notice of appeal was not given maliciously or without reasonable or probable cause. 7. The defendants will object that the plaintiff cannot recover in respect of grievances happening or special damage accruing after the commencement of this action. 8. The defendants, while denying liability, bring into court the sum of £555 and say that it is sufficient to satisfy the plaintiff's claim.

In March, 1903, this sum was taken out of court by the plaintiff and so the action has terminated without a public hearing in court, the company paying also the plaintiff's taxed costs of the action.

METROPOLITAN HOSPITAL SUNDAY FUND.

AT a meeting of the council of the Metropolitan Hospital Sunday Fund, which was held at the Mansion House on May 12th under the presidency of the Lord Mayor, a vote of condolence with the family of the late Prebendary Kitto was passed on the motion of the Rev. F. C. Carr Gomm, seconded by Mr. J. H. Hale.

Among those present were Sir Joseph Dimsdale, the Bishop of Stepney, Archdeacon Sinclair, Mr. Wakley, Prebendary Ridgeway, and Canon Rhodes Bristow.

The Lord Mayor announced that, by the King's desire, the Hospital Sunday collection would be taken at St. Paul's Cathedral on Sunday, June 7th. The collections at other places of worship would be made on June 14th. Mr. George Herring, the Lord Mayor said, had again offered to contribute £25,000 provided that £100,000 were raised in the various places of worship. He (the Lord Mayor) would attend the service at St. Paul's Cathedral on June 7th and it would give him the greatest pleasure to receive contributions from anyone who desired to commemorate the visit of their Majesties on such a historic occasion—the first on which the Sovereign had attended St. Paul's Cathedral for the express purpose of benefiting the London hospitals. The whole deficiency of the London hospitals, provided that they were kept under the control of this and similar funds, amounted to £250,000 per annum. This meant that if the Hospital Sunday Fund could raise £100,000 yearly, King Edward's Fund £100,000, and the Hospital Saturday Fund £50,000, assistance from the rates would not be required. Banks, insurance companies, and most of the limited liability companies were entitled to contribute out of their corporate funds towards hospital purposes, and since this fact had been made known nearly every bank in the City had sent him a donation towards the London Hospital. If the banks and the limited liability companies generally could make up their mind to contribute towards one of the three funds for assisting the hospitals the deficiency of £250,000 would soon be made up. According to his promise made at the conference of ministers which was recently held at the Mansion House he had sent out 5000 letters of appeal to the principal residents in the home counties. The King and Queen had consented to attend the service at St. Paul's Cathedral on June 7th and this fact should insure a record collection.

Sir Edmund Hay Currie read the following letter from Mr. George Herring:—

> I propose to make the same offer as last year to the council of the Hospital Sunday Fund—namely, I will send a cheque for £10,000, or add one-fourth to the amount collected in all places of public worship. But you are showing such increased energy this year that I must limit the amount to £100,000, so that if the collection exceeds that sum (which I sincerely hope may be the case) I only give £25,000.

Sir Henry Burdett said that limited liability companies had now taken the place of private firms to a large extent and if the former would only contribute a due proportion of their profits to charities, as was formerly done by the heads of private business houses, the London hospitals would soon be in a sound financial position.

Archdeacon Sinclair said that Sir Edmund Hay Currie was endeavouring to obtain the consent of a number of gentlemen to act as stewards at the service at St. Paul's Cathedral on June 7th. Mr. William Herring had offered to act as a steward and promised to head his list with £1000.

The Bishop of Stepney said that the King wished his visit to the Cathedral to be as far as possible of a personal and private character and the object of his presence at the service was to support the Metropolitan Hospital Sunday Fund in the effort which was being made to increase the amount collected. Their business must be to coöperate with the King in making the service at the Cathedral an opportunity for awakening latent interest in the hospitals.

Prebendary Ridgeway said that, while desiring to get a large collection at St. Paul's Cathedral, he hoped they would avoid drawing on the congregational collections throughout London. The service at St. Paul's Cathedral was to increase the general interest in the Hospital Fund on the following Sunday.

Archdeacon Sinclair said that the object of the service at St. Paul's Cathedral was to reach only those connected with the City and not to appeal to wealthy people outside. The Bishop of Stepney would probably preach the sermon.

On the motion of Dr. J. G Glover a vote of thanks to the Lord Mayor terminated the proceedings.

THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

A QUARTERLY meeting of this College was held on May 5th, Dr. T. S. Clouston, the President, being in the chair.

The President read the following loyal address which had been prepared for presentation to King Edward on his approaching visit to Edinburgh and which was unanimously approved:—

To the King's Most Excellent Majesty.

The humble, loyal, and dutiful address of the President and Fellows of the Royal College of Physicians of Edinburgh. May it please your Majesty,

We, your Majesty's loyal and dutiful subjects, the President and Fellows of the Royal College of Physicians of Edinburgh, desire to offer your Majesty our most hearty welcome on your Majesty's visit to the capital of Scotland. We desire also to thank your Majesty for the honour you have thus conferred on Edinburgh and we earnestly hope your Majesty's stay here will be a pleasure to your Majesty and to Queen Alexandra

We know the great interest your Majesty has always taken in the profession of medicine and in all those institutions whose object is to cure disease and to mitigate human suffering. This being the work of the Fellows of our College, none of your Majesty's subjects are better able than they to realise the great benefits that have resulted to the sick and to the progress of medicine through your Majesty's example and influence in supporting hospitals, in promoting the public health, and in encouraging the medical profession in its increasing fight against disease. Your Majesty's ancient capital of Scotland stands out in your Majesty's whole realm as a mother city of noble hospitals and great medical corporations and is the seat of the largest medical school in your Majesty's dominions. The College therefore specially appreciates your Majesty's sympathy with medical objects and your Majesty's patronage of medical institutions.

That the Almighty may grant to your Majesty and to your Royal house the blessings of health and happiness is the fervent prayer of your Majesty's most loyal and faithful servants.

The President referred in sympathetic terms to the loss which the College had sustained through the death of Mr. J. Matheson Shaw, the late sub-librarian.

The following Members were admitted by ballot to the Fellowship of the College: Henry Aylmer Dumat, M.D. Edin.; William Thomas Ritchie, M.D. Edin.; John Cumming, F.R.C.S.Edin.; and Alexander Dingwall Fordyce, M.B., Ch.B. Edin.

The Registrar reported that since the last quarterly meeting 52 persons had obtained the Licence of the College by examination.

The Curator's report regarding the work undertaken in the laboratory during the past year showed that 29 workers had been engaged in research, that 1868 specimens had been reported on, and that the expenditure had amounted to £1017.

The Freeland-Barbour Fellowship was awarded to Dr. Alexander Goodall of Edinburgh.

The Treasurer announced that the late Mr. J. Matheson Shaw, sub-librarian of the College, had bequeathed a sum of money for the purpose of founding a lectureship in the College, the lectures to treat of recent advances in medicine.

The draft regulations regarding the various examinations for the triple qualification for the ensuing year were considered and approved.

By vote of the College John Flanagan was suspended *sine die* from his Licence to practise, as granted by the College, and from all his rights and privileges as Licentiate.—Alfred Hunter Goodwyn was expelled from the College and deprived of his Licence to practise, as granted by the College, and of all his rights and privileges as Licentiate.

Looking Back.

FROM

THE LANCET, *SATURDAY*, MAY 14, 1825.

REGULAR PHYSICIANS GRINDING ![1]

Surely, Mr. Editor, were it not a grave subject, one might laugh to think, that a young man just passed his minority might, by *a mechanical process*, get up a thesis, and grind himself into an M.D., whilst a man of the most extensive education and long practice, who has been educated in London rather than in Edinburgh, and who has legally obtained a degree from Aberdeen, instead of Edinburgh or Glasgow, is to be regarded as an irregularly educated physician. The expense of a medical education is here out of the question, it being well known that the fees of attendance, and living in London are greater; and that the graduating fee at either of the Universities of the North, is about *the same,—viz. nearer 30l. than 15l.*, as mentioned by Mr. Brougham in the House.

We have heard much of late of the degenerated state of the medical profession. How is this to be accounted for? Are not as many regularly ground M.D.'s thrown off annually on the world as heretofore? If the latter question be answered affirmatively, will this explain the cause? Or is it owing to the before-named mal-practices of the more northern Universities? In truth I am not inclined to think that the profession is more degenerate, I *most heartily* concur in the sentiment of Sir ASTLEY COOPER on this subject, who says, "it is consolatory to know that the human frame is better understood at the present epoch by *students*, than it was forty years ago by *professors*. The march of improvement has been most rapid."* I much suspect, Sir, that the croaking has originated with the would-be-lights of the world, and that the unnatural efforts which have been made to protect favoured schools, and self-favouring partizans, have tended much to bring the odium which exists, if there be any, on the profession. I regret the withdrawment of Sir ASTLEY COOPER from the Borough School; he retires, however, full of honours. Let us hope that men will be found with equal zeal for the education of our medical students, to follow up those principles which he, during many years, so ably inculcated.

Admitting for a moment, and that for argument sake only, that a man who has graduated at Edinburgh, after grinding, is the most regularly educated, and that it is a desideratum that all who practise as physicians should, in the first place, grind *secundum artem*. Why not establish a university in London, for the purposes of college education, and for the conferring of degrees? The consequence of such a measure would be, that few of our English students would then go to the north at all, except on the score of saving expence. If, however, we cannot have an university in the British metropolis, where medical students may graduate, let the pupils of the first medical schools be allowed to enter any one of the Scotch *Universities, and let them be received as candidates for the doctorate*, which should be granted to them as the result of successful examination in *real attainments*. Let them be examined in every branch connected with the profession, wherever they may have studied. It is a mere farce to pretend that a man cannot be regularly educated as a medical practitioner in England or in Scotland, and it is worse than a farce to presume that a man is qualified to preside in a consultation with his medical brethren because he has been drilled for a few months to the answering of questions on medical science in Scotch Latin.

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* Lancet, vol. i., p. 6.

[1] Excerpts from a letter to the Editor of THE LANCET, signed "R. H. F."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8608 births and 4618 deaths were registered during the week ending May 9th. The annual rate of mortality in these towns, which had been 15·9, 17·4, and 17·5 per 1000 in the three preceding weeks, declined again last week to 16·0 per 1000. In London the death-rate was 15·7 per 1000, while in the 75 other large towns it averaged 16·1 per 1000. The lowest death-rates in these towns were 8·2 in Willesden, 10·2 in Leyton and in Hastings, 10·3 in Croydon, 10·6 in Kings Norton, 11·0 in Derby, 11·1 in Hull, and 11·2 in Brighton and in Cardiff; while the highest rates were 19.7 in Rochdale, 20·1 in Great Yarmouth, 20·8 in South Shields and in Tynemouth, 20 9 in Liverpool, 21·0 in Oldham, 22·5 in Middlesbrough, and 23·5 in Wigan. The 4618 deaths in these towns last week included 457 which were referred to the principal infectious diseases, against 454, 504, and 518 in the three preceding weeks; of these 457 deaths 137 resulted from measles, 124 from whooping-cough, 57 from diarrhœa, 50 from diphtheria, 48 from scarlet fever, 27 from "fever" (principally enteric), and 14 from small-pox. In Brighton, Reading, Norwich, Plymouth, Devonport, York, Newport (Mon.), and in seven other smaller towns, no death from any of the principal infectious diseases was registered last week; the highest death-rates from these diseases were recorded in Tottenham, Walthamstow, Wolverhampton, West Bromwich, Bootle, Wigan, Oldham, Sheffield, and Rhondda. The greatest proportional mortality [illegible] Walthamstow, [illegible]; from whooping-[illegible] West Bromwich, Coventry, Oldham, Huddersfield, Sheffield, and Rhondda: from "fever" in Bootle, and from diarrhœa in Wallasey. The mortality from scarlet fever and from diphtheria showed no marked excess in any of the large towns. Four fatal cases of small-pox were registered in Liverpool, two in Walsall, two in Leicester, and one each in Bury, Manchester, Rochdale, Bradford, Leeds, and Sheffield. The Metropolitan Asylums hospitals contained 60 small-pox patients on Saturday last, May 9th, against numbers increasing from five to 47 on the ten preceding Saturdays; 17 new cases were admitted during the [illegible] weeks. [illegible] and in [illegible] .00, and 1717 at the end of the three preceding weeks, had further risen to 1730 at the end of last week; 229 new cases were admitted during the week, against 188, 243, and 235 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 262, 280, and 284 in the three preceding weeks, declined again last week to 260, but were 20 above the number in the corresponding period of last year. The causes of 57, or 1·2 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner. The causes of all the deaths were duly certified in Portsmouth, Bristol, Nottingham, Salford, Bolton, Leeds, Cardiff, and in 46 other smaller towns; the largest proportions of uncertified deaths were registered in Smethwick, Liverpool, Bootle, Wigan, Blackburn, Sheffield, and Middlesbrough.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 17·7, 18·5, and 19·2 per 1000 in the three preceding weeks, declined again to 17·9 per 1000 during the week ending May 9th, but was 1·9 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 11·5 in Dundee and 14·9 in Aberdeen to 20·1 in Perth and 24·8 in Greenock The 585 deaths in these towns included 26 which were referred to whooping-cough, 11 to diarrhœa, eight to measles, five to diphtheria, four to scarlet fever, and three to "fever," but not one to small-pox. In all, 57 deaths resulted from these principal infectious diseases last week, against 53, 59, and 57 in the three preceding weeks. These 57 deaths were equal to an annual rate of 1·7 per 1000, which was slightly above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 17, 30, and 32 in the three preceding weeks, declined again last week to 26, of which 14 were registered in Glasgow, four in Edinburgh, and two in Leith. The deaths from diarrhœa, which had been 17, 18, and 11 in the three preceding weeks, were again 11 last week, and included three in Glasgow, three in Dundee, and three in Aberdeen. The fatal cases of measles, which had been seven, four, and seven in the three preceding weeks, rose last week to eight, of which five occurred in Edinburgh and two in Glasgow. The deaths from diphtheria, which had been eight, two, and one in the three preceding weeks, increased again to five last week and included two in Glasgow and two in Edinburgh. The fatal cases of scarlet fever, which had been two, two, and four in the three preceding weeks, were again four last week; of these, two were recorded in Glasgow and two in Paisley. Two of the fatal cases of "fever" occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 109, 129, and 125 in the three preceding weeks, further declined last week to 104 and were slightly below the number in the corresponding period of last year. The causes of 21, or nearly 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·5, 24·8, and 25 7 per 1000 in the three preceding weeks, declined again to 25·3 per 1000 during the week ending May 9th. During the past four weeks the death-rate has averaged 25·1 per 1000, the rates during the same period being 16·5 in London and 17·5 in Edinburgh. The 184 deaths of persons belonging to Dublin registered during the week under notice showed a decline of three from the number in the preceding week and included 15 which were referred to the principal infectious diseases, against six, eight, and nine in the three preceding weeks; of these, four resulted from small-pox, four from whooping-cough, three from "fever," two from scarlet fever, one from diphtheria, and one from diarrhœa, but not one from measles. These 15 deaths were equal to an annual rate of 2·1 per 1000, the death-rates last week from the same diseases being 1·7 in London and 2·1 in Edinburgh. The fatal cases of small-pox numbered four last week against three in the previous week. The deaths from whooping-cough, which had been one in each of the three preceding weeks, rose last week to four. The fatal cases of "fever," which had been two, one, and two in the three preceding weeks, increased to three last week. The 184 deaths in Dublin last week included 32 of children under one year of age and 46 of persons aged 60 years and upwards; the deaths of infants slightly exceeded the numbers in the preceding week, while those of elderly persons showed a marked decline. Five inquest cases and two deaths from violence were registered, and 62, or more than a third, of the deaths occurred in public institutions. The causes of ten, or more than 5 per cent., of the deaths in Dublin last week were not certified.

VITAL STATISTICS OF LONDON DURING APRIL, 1903

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 5·4 per 1000 of the population, estimated at 4,613,812 persons in the middle of the year. In the three preceding months the rates had been 6·5, 6·2, and 5·9 per 1000 respectively. The rates were considerably below the average in Hammersmith, the City of Westminster, Hampstead, Stoke Newington, the City of London, Bethnal Green, and Greenwich, while they showed the largest excess in Chelsea, St. Marylebone, Bermondsey, Wandsworth, Deptford, Lewisham, and Woolwich. The prevalence of small-pox showed a marked increase upon that recorded in the preceding month; of the 48 cases notified during April, seven belonged to Poplar, seven to Southwark, five each to Kensington, Fulham, and Camberwell, and four to Battersea. The Metropolitan Asylums hospitals contained 47 small-pox patients at the end of last month, against seven, five, and 13 at the end of the three preceding months; the weekly admissions averaged 12, having been three in each of the six preceding months. The prevalence of scarlet fever showed a slight decline last month as compared with the preceding month; among the various metropolitan boroughs this disease was proportionally most prevalent in Chelsea, St. Marylebone, Wandsworth, Deptford, Lewisham, and Woolwich. The number of scarlet fever patients in the Metropolitan Asylums hospitals, which had been 1980, 1820, and 1704 at the end of the three preceding months, had further declined to 1685 at the end of last month; the weekly admissions averaged 201, against 212, 205, and 208 in the three preceding months. The prevalence of diphtheria last month was slightly less than in the preceding month; this disease was proportionally most prevalent in Hackney, Shoreditch, Stepney, Poplar, Lewisham, and Deptford. There were 760 cases of diphtheria under treatment in the Metropolitan Asylums hospitals at the end of last month, against 936, 1030, and 903 at the end of the three preceding months; the weekly admissions averaged 105, against 131, 152, and 126 in the three preceding months. Enteric fever was much less prevalent during April than in any recent month; among the various metropolitan boroughs the greatest proportional prevalence of this disease occurred in the City of Westminster, St. Marylebone, Stoke Newington, Holborn, Southwark, Bermondsey, and Lambeth. The number of enteric fever patients under treatment in the Metropolitan Asylums hospitals, which had been 172, 125, and 92 at the end of the three preceding months, had further declined to 53 at the end of the last month; the weekly admissions averaged five, against 22, 13, and 15 in the three preceding months 10 cases of typhus fever were notified during April, of which eight belonged to the borough of Bermondsey. Erysipelas was proportionally most prevalent in Kensington, Chelsea, St. Marylebone, Finsbury, Shoreditch, and Deptford. The 17 cases of puerperal fever notified during the month included three in Islington, three in Camberwell, two in the City of Westminster, and two in Hackney.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in public institutions having been distributed among the boroughs in which the deceased persons had previously resided. During the four weeks ending May 2nd the deaths of 5596 persons belonging to London were registered, equal to an annual rate of 15·8 per 1000, against 18·2, 16·5, and 15·9 per 1000 in the three preceding months. The lowest death-rates in the several metropolitan boroughs last month were 10·4 in Hampstead, 11·7 in Wandsworth, 11·8 in Lewisham, 12·8 in the City of London and in Camberwell, and 13·2 in Greenwich; the highest rates were 18·1 in St. Marylebone, 18·2 in Southwark, 18·8 in Stepney and in Poplar, 19·1 in Finsbury, 21·9 in Shoreditch, and 22·1 in Holborn The 5596 deaths from all causes included 622 which were referred to the principal infectious diseases; of these, 270 resulted from measles, 23 from scarlet fever, 64 from diphtheria, 169 from whooping-cough, two from typhus fever, 17 from enteric fever, one from simple continued fever, and 76 from diarrhœa, but not one from small-pox. The lowest death-rates last month from these infectious diseases were recorded in Hammersmith, Fulham, St. Marylebone, Hampstead, Finsbury, Camberwell, and Woolwich; and the highest

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING APRIL, 1903.

(*Specially compiled for* THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1903	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births
		Small pox.	Scarlet fever.	Diphtheria *	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,613,812	48	923	545	10	54	2	17	315	—	1919	5·4	—	270	23	64	169	2	17	1	76	622	1·8	5596	15·8	118
West Districts.																										
Paddington	148,032	1	27	9	1	—	—	—	7	—	45	4·0	—	5	—	3	7	—	2	-	1	18	1·6	170	15·2	112
Kensington	178,409	5	31	15	—	1	—	—	16	—	68	5·0	—	—	1	1	12	—	—	—	1	15	1·1	185	13·5	114
Hammersmith	115,803	—	16	11	—	—	—	1	6	—	34	3·8	—	3	—	1	1	—	1	—	3	9	1·0	132	14·9	91
Fulham	147,760	5	26	19	—	1	—	—	4	—	55	4·9	—	—	1	1	2	—	1	—	4	9	0·8	162	14·3	122
Chelsea	74,169	2	66	3	—	1	—	—	10	—	82	14·4	—	2	1	—	2	—	—	—	4	9	1·6	99	17·4	152
City of Westminster	179,052	—	24	8	—	4	—	2	10	—	48	3·5	—	6	3	2	6	—	2	—	1	20	1·5	205	14·9	95
North Districts.																										
St. Marylebone	131,234	—	37	17	—	4	—	—	15	—	73	7·3	—	—	1	—	6	—	—	—	3	10	1·0	182	18·1	113
Hampstead	85,197	—	11	8	—	1	—	—	4	—	24	3·7	—	—	2	—	2	—	—	—	—	4	0·6	68	10·4	102
St. Pancras	235,716	2	48	35	—	4	—	1	9	—	99	5·5	—	31	2	6	10	—	—	-	4	53	2·9	322	17·8	114
Islington	339,137	—	46	43	—	2	—	3	18	—	112	4·3	—	20	—	6	18	—	1	—	6	51	2·0	408	15·7	129
Stoke Newington	52,069	1	3	4	—	2	1	—	1	—	12	3·0	—	6	—	4	5	—	—	—	—	15	3·8	67	16·8	171
Hackney	224,082	—	45	37	—	2	—	2	19	—	105	6·1	—	19	3	2	7	—	—	—	1	32	1·9	256	14·9	111
Central Districts.																										
Holborn	57,845	—	12	5	—	4	—	1	4	—	26	5·9	—	6	1	—	1	—	—	-	1	9	2·0	98	22·1	72
Finsbury	99,717	—	14	8	—	—	—	1	9	—	32	4·2	—	4	—	—	4	—	—	—	—	8	1·0	146	19·1	121
City of London	24,539	—	5	—	—	—	—	—	—	—	5	2·7	—	1	—	—	1	—	—	—	—	2	1·1	24	12·8	115
East Districts.																										
Shoreditch	117,513	—	9	19		2	—	—	12	—	42	4·7	—	13	—	3	3	—	1		5	25	2·8	197	21·9	162
Bethnal Green	130,023	—	12	12	1	2	—	—	10	—	37	3·7	-	14	—	3	4	—	—	—	2	23	2·3	173	17·3	111
Stepney	302,153	2	40	53	-	3	—	—	23	—	121	5·2	—	30	—	5	7	—	1	-	10	53	2·3	435	18·8	115
Poplar	169,550	7	17	30	-	—		—	14	—	68	5·2	—	36	1	—	10	—	—	-	4	51	3·9	244	18·8	161
South Districts																										
Southwark	207,303	7	33	27	—	4	—	—	13	—	84	5·3	—	10	—	1	9	—	1		8	29	1·8	289	18·2	151
Bermondsey	129,601	3	30	16	8	3	—	—	6	—	66	6·6	—	6	2	2	3	2	—	—	3	18	1·8	164	16·5	113
Lambeth	307,711	—	71	17	—	6	1	1	25	—	121	5·1	—	12	—	1	12	—	3	1	4	33	1·4	382	16·2	118
Battersea	173,422	4	38	22	—	1	—	—	14	—	79	5·9	—	11	1	3	10	—	1	—	1	27	2·0	215	16·2	140
Wandsworth	249,078	3	74	29	—	—	—	1	20	—	127	6·6	—	11	2	1	10	—	1	—	3	28	1·5	224	11·7	92
Camberwell	265,562	5	61	21	—	4	—	3	19	—	113	5·5	—	3	—	3	7	—	1	-	2	16	0·8	260	12·8	94
Deptford	112,537	—	38	29	—	1	—	—	12	—	80	9·3	—	4	1	8	2	—	—	—	1	16	1·9	135	15·6	118
Greenwich	99,824	—	12	11	—	—	—	1	5	—	29	3·8	—	8	1	5	4	—	—	-	—	18	2·4	101	13·2	82
wisham	136,405	—	44	21	—	—	—	—	7	—	72	6·9	—	7	—	3	—	—	—	—	3	13	1·2	123	11·8	87
wich...	121,473	1	38	16	—	2	—	—	3	—	60	6·4	—	2	—	—	4	—	1	—	1	8	0·9	130	13·9	123
of London	-	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

rates in St. Pancras, Stoke Newington, Shoreditch, Bethnal Green, Stepney, Poplar, and Greenwich. The 270 deaths from measles were 13 below the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in St. Pancras, Stoke Newington, Holborn, Shoreditch, Bethnal Green, Stepney, and Poplar. The 23 fatal cases of scarlet fever showed a decline of 30 from the average number in the corresponding periods of the ten preceding years; the highest proportional mortality from this disease occurred in the City of Westminster, Hampstead, Hackney, and, Bermondsey. The 64 deaths from diphtheria were slightly less than one half of the corrected average number; among the various metropolitan boroughs this disease showed the highest proportional fatality in Stoke Newington, Shoreditch, Bethnal Green, Deptford, and Greenwich. The 169 fatal cases of whooping-cough were 76 below the average number in the corresponding periods of the ten preceding years; this disease was proportionally most fatal in Paddington, Kensington, Islington, Stoke Newington, Poplar, and Battersea. The 20 deaths referred to different forms of "fever" showed a decline of eight from the corrected average number; among the various metropolitan boroughs the highest "fever" death-rates were recorded in Paddington, the City of Westminster, Lambeth, and Bermondsey, two fatal cases of typhus fever both belonging to the last-named borough. The 76 deaths from diarrhœa were 30 in excess of the average number in the corresponding periods of the ten preceding years; the highest proportional mortality from this disease occurred in Hammersmith, Fulham, Chelsea, Shoreditch, Stepney, Poplar, and Southwark. In conclusion, it may be stated that the aggregate mortality from these principal infectious diseases in London last month was more than 23 per cent. below the average.

Infant mortality in London during April, measured by the proportion of deaths among children under one year of age to registered births, was equal to 118 per 1000. The lowest rates of infant mortality were recorded in Hammersmith, the City of Westminster, Holborn, Wandsworth, Camberwell, Greenwich. and Lewisham; and the highest rates in Chelsea, Stoke Newington, Shoreditch, Poplar, Southwark, and Battersea.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointment is notified:—Staff Surgeon C. S. Woodwright to the *Victory* and tenders for instruction of Probationary Sick Berth Staff, to date May 18th.

ARMY MEDICAL STAFF.

Colonel W. J. Fawcett, from Royal Army Medical Corps, to be Surgeon-General, on temporary augmentation. Dated April 1st, 1903.

ROYAL ARMY MEDICAL CORPS.

Surgeon-Captain (temporary Surgeon-Lieutenant in the Army) H. N. A. Taylor, 3rd Volunteer Battalion the Essex Regiment, is granted the temporary rank of Surgeon-Captain in the Army whilst serving with the regular troops. Dated Feb. 7th, 1903

INDIAN MEDICAL SERVICE.

Bengal Establishment: Lieutenant-Colonels to be Colonels: Mathew Denis Moriarty (dated Oct. 25th, 1902) and Bartholomew O'Brien (dated Nov. 1st, 1902).

The King has approved of the retirement from the service of the undermentioned officers:—Lieutenant-Colonel Alfred James O'Hara (dated Nov. 2nd, 1902) and Lieutenant-Colonel Alfred William Frederick Street, D.S.O. (dated April 2nd, 1903).

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major F. W. Grant having resigned his appointment in the Volunteers ceases to be an officer in the Army Medical Reserve of Officers. Dated May 9th, 1903. Surgeon-Lieutenant Robert Athelstan Draper, 1st East Riding of Yorkshire, Royal Garrison Artillery Volunteers, to be Surgeon-Lieutenant. Dated May 9th, 1903. Surgeon-Captain Thomas Kay, 1st Lanarkshire Royal Garrison Artillery Volunteers, to be Surgeon-Captain. Dated May 13th, 1903.

IMPERIAL YEOMANRY.

Royal North Devon (Hussars): William Francis Lucius Austen Holcroft to be Surgeon-Lieutenant under paragraph 30 Yeomanry Regulations. Dated May 9th, 1903. Glamorganshire: Surgeon-Lieutenant R. M. Moynan resigns his commission. Dated May 9th, 1903. 4th County of London (King's Colonials): Surgeon-Lieutenant L. J. H. Oldmeadow resigns his commission. Dated April 2nd, 1903.

VOLUNTEER CORPS.

Submarine Miners: The Tyne Division: Surgeon-Major F. W. Gibbon, from 1st Durham Royal Engineers (Volunteers), to be Surgeon-Major. Dated May 13th, 1903.

Rifle: 7th Volunteer Battalion the Royal Scots (Lothian Regiment): Surgeon-Lieutenant A. J. Grant to be Surgeon Captain. Dated May 13th, 1903. 1st Volunteer Battalion the Royal Fusiliers (City of London Regiment): Surgeon Lieutenant J. R. Ryan to be Surgeon-Captain. Dated April 28th, 1903. 3rd (Dundee Highland) Volunteer Battalion the Black Watch (Royal Highlanders): Surgeon-Captain W. Kinnear to be Surgeon-Major. Dated May 9th, 1903. Surgeon-Lieutenant. W. S. Malcolm to be Surgeon-Captain. Dated May 9th, 1903. 1st Volunteer Battalion the Norfolk Regiment: Surgeon-Lieutenant J. M. G. Bremner to be Supernumerary whilst serving with the Norfolk Volunteer Infantry Brigade Bearer Company. Dated March 14th, 1903 3rd Volunteer Battalion the Essex Regiment: The promotion of Surgeon-Lieutenant H. N. Taylor to the rank of Surgeon-Captain, which was announced in the *London Gazette* of Feb 6th last bears date Dec. 30th, 1902. 3rd (Renfrewshire) Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders): Surgeon-Lieutenant W. D. Macfarlane to be Surgeon-Captain. Dated May 9th, 1903 3rd (Cambridgeshire) Volunteer Battalion the Suffolk Regiment: Surgeon-Captain E. L. Jones resigns his commission. Dated May 13th, 1903. 2nd (South) Middlesex: The undermentioned Surgeon-Lieutenants to be Surgeon-Captains:—E. P. Isaacs (dated April 21st, 1903) and S. F. Holloway (dated April 21st, 1903). 3rd Volunteer Battalion the Gloucestershire Regiment: Frederick St. John Bullen to be Surgeon-Lieutenant. Dated May 13th, 1903. 1st Volunteer Battalion Princess Charlotte of Wales's (Royal Berkshire Regiment): William Maskelyne Parham to be Surgeon-Lieutenant. Dated April 28th, 1903. 4th Volunteer Battalion the Durham Light Infantry: Surgeon-Lieutenant S. W. Plummer to be Surgeon-Captain. Dated April 18th, 1903.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The Glasgow Companies: James Walker to be Lieutenant. Dated May 13th, 1903. The Manchester Companies: Lieutenant J. Collier to be Captain. Dated May 9th, 1903.

VOLUNTEER INFANTRY BRIGADES

Argyll and Sutherland: Surgeon-Lieutenant-Colonel D. W. Currie, 7th (Clackmannan and Kinross) Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders), to be Brigade-Surgeon-Lieutenant-Colonel whilst holding the appointment of Senior Medical Officer of the Brigade. Dated May 13th, 1903. Gordon: Surgeon-Lieutenant-Colonel A. Mitchell, 3rd (The Buchan) Volunteer Battalion the Gordon Highlanders, to be Brigade-Surgeon-Lieutenant-Colonel whilst holding the appointment of Senior Medical Officer of the Brigade. Dated May 13th, 1903. Liverpool: Surgeon-Lieutenant-Colonel G. Westby, 2nd Volunteer Battalion the King's (Liverpool Regiment), to be Brigade-Surgeon-Lieutenant-Colonel whilst holding the appointment of Senior Medical Officer to the Brigade. Dated April 4th, 1903.

EDINBURGH COMPANY ROYAL ARMY MEDICAL CORPS VOLUNTEERS.

Former members of this company will be interested to know that the instructor, Staff Sergeant Lloyd, R.A.M.C., who has been attached to the Edinburgh company of medical students for the past 14 years, is about to retire into civil life. It is proposed to mark the occasion by presenting to the instructor some suitable expression of the friendly relations which have existed for so many years between him and the members who have passed through his hands. Towards this end any subscriptions sent by former members will be received and acknowledged by Major Hepburn, M.D., R.A.M.C.V., Anatomy Department, University of Edinburgh.

THE ROYAL MILITARY TOURNAMENT.

The tournament which opens at the Agricultural Hall to-day (Friday) promises to be in no way behind its predecessors. The *pièce de résistance* this year will represent the Delhi Durbar and this fact alone should be the means of securing a "full house" every day As our readers know, the military charities benefit largely by this annual tournament

Correspondence.

"Audi alteram partem"

ASEPTIC AND ANTISEPTIC SURGERY

To the Editors of THE LANCET

SIRS,—The discussion on the above subject in THE LANCET of February and March,[1] now coming to hand here, appeals to the surgeon no matter in what part of the globe he may be practising his art It may be taken for granted that any radical advance in surgery must be of world wide application Such is true of antiseptic surgery but the champions of aseptic technique have still their case to prove It would be interesting to know how they would apply their system in the following circumstances Since last autumn the survey has been in a series of temporary camps in the Ashanti jungle between Obuassi and Kumasi The bush is cleared and the camp built and we enter into occupation within the week Each of these camps is occupied for a period. varying from four to five weeks only, so of course everything is in the rough Ever since we left Obuassi the labourers, of whom there are several hundreds, to a greater or less extent have been suffering from sloughing phagedæna which Manson[2] writes is with difficulty to be distinguished from hospital gangrene The carriers of infection in these cases are flies, as I expect to be able to bring evidence to prove at some future date Our water supply is so bad (although it is the best available) that the drinking water is always coloured even after careful boiling and filtration, stinks in the upper compartment of the Berkefeld filters, and upon one occasion after filtration turned rose pink permanganate solution instantly brown

On Monday, March 23rd, at 9 P M, in the midst of a tornado with rain pouring down as it only can in the tropics, four men arrived at our camp carrying a hammock composed of a bamboo and some sacking in which lay huddled up a man with his right foot cut almost completely through horizontally, opening up the ankle joint from the inner side outwards. The man was soaked through, lying in a pool of blood and dirty water, and was very much collapsed The injury was caused I was informed by an axe which had slipped while the man was working with one of the clearing gangs further down the line He had been brought for six miles or more through the rain storm and dark over a roughly cleared track On examination by the light of a hurricane lamp I found a tremendous gash full of leaves and dirt with which an endeavour had been made to arrest hæmorrhage The ankle joint was sheared clear through the stroke having severed the posterior tibial artery which was feebly bleeding The wound was well washed out with 1 in 2000 perchloride lotion[3] and dressed with sal alembroth gauze and chinosol absorbent wool (the only antiseptic dressings available) A wisp of moistened gauze was also wrapped round the leg below the knee to disinfect the skin should it be found necessary to proceed to amputation The man was then carried over from the messroom and put for the night into a little hut which had been built at the end of the white camp to contain a lunatic suffering from guinea worm abscess The patient had to be moved outside with his guard to make room

Next morning as soon as things could be got ready after daylight and permission to do what was necessary obtained from the patient, chloroform was given and the injured limb was thoroughly examined The lower part of the foot was dead and cold, the ankle joint was injured and exposed and the tarsus was divided horizontally Not sufficient skin could be obtained to make an external lateral flap at the ankle, so amputation was performed at the seat of election, as it was hoped that at least a peg leg might be available in the country somewhere As no gut was obtainable for ligatures the main arteries were tied with silk soaked in perchloride lotion (1 in 1000) and the smaller bleeding points were commanded with pressure forceps, which were afterwards twisted off. The ends of the silk ligatures were led outside, and a gauze drain was inserted into each angle of the flaps The whole stump was dressed with sal alembroth gauze and chinosol wool The operation was carried out in the paymaster's hut, the patient lying on a litter made of split green palm rib, supported on a folding table and a packing case. The paymaster took over the chloroform after the patient was under and the junior assistant engineer, who was convalescing from an attack of fever manipulated the leg as directed When the patient came to from the chloroform he was tied firmly to the litter with creepers so that he could not move, while the stump was rested gently on a pillow made of straw bottle cases and newspapers In the evening his pulse was good though quick and his temperature only 99° F A watchman was left to guard him during the night and to give him drink or to attend to him generally Next morning I was informed that the patient had undone his bonds and wriggled himself loose and had got his dressing off I found the stump partly lying within the dressing but freely exposed to the air and the flies buzzing round The surface was at once washed with perchloride lotion (1 in 1000) and a 1 in 2000 lotion was syringed into the angles of the flap That evening the temperature was 100 2° F and next evening 101 4°, but the discharge was serous and not offensive in the least This was the highest temperature reached On Friday, March 27th, the dressings ran out but the principal medical officer at the fort at Kumasi kindly gave me two rolls of absorbent wool and some old field dressings These latter were split up and the contained gauze from them and the absorbent wool were soaked in perchloride lotion (1 in 2000) and dried in the sun With these the stump has been since dressed and for the last two days the evening temperature has not been above 99° F The stump looks healthy, there is very little discharge, and the man is free from pain and eats and sleeps well

The future progress of the case is of course doubtful in a country where apparently healthy skin breaks down into gangrenous ulcers and where Manson advises that no operative interference unless imperatively necessary, should be undertaken on account of the danger of tetanus To sum up then, by the use of antiseptics (1) a wound filled with dirt of all kinds does not cause general infection, (2) an operation conducted with scratch materials and scratch assistants gives a healthy stump, (3) a stump is exposed to the attacks of flies in an insanitary hut but does not become infected to any extent, and (4) dressings and water of doubtful character have been used without evil effect Can our aseptic champions suggest any feasible procedure by which such results could be obtained by their methods? My antiseptic outfit, with the exception of four dressings of gauze and wool, consisted of a four ounce stoppered bottle of perchloride soloids easily carried in the breast pocket

I am Sirs, yours faithfully,

CHARLES S PATTERSON, M B Edin, M R C S Eng,
Medical Officer Obuassi Kumasi Survey Gold Coast
Government Railways

Eighty two Mile Camp March 31st, 1903

THE SPITTING NUISANCE—SPITTING IN PUBLIC-HOUSES

To the Editors of THE LANCET

SIRS,—As a means for the prevention of tuberculosis it is chiefly important that spitting should be stopped in places where it is most likely to do harm Of all places of resort probably the public house is the most fruitful source of phthisis It has been found that in France the amount of phthisis varies with the amount of alcohol drunk and the English Registrar General has shown that public house servants suffer from this disease to a far greater extent than any other class of the community It is these servants who sweep out the bars In poor districts it may be safely said that every public house bar is visited by at least one consumptive every day and he probably spits on the floor while there

I have formed the opinion, on evidence as conclusive as it seems possible to get that the majority of adult male consumptives in my own district have derived the infection from the public house *It is obvious then, that of all* places where it is desirable to stop spitting the public-house is by far the most important. Yet I am informed that the terms "public hall, public waiting-room, or place of public entertainment," as used in the Glamorganshire by-law against spitting, do not include "public houses." If so, it is most important that these should be specifically included in any by-laws made for the County of London. Besides being pre-eminently desirable it is, I believe, perfectly practicable to stop spitting in public-houses. They are under continual police supervision and it is to the interest of the landlord and his servants to keep their bar clean. The publicans are becoming aware of the danger they run from the infection of phthisis and many of them would be glad to join in an effort to reduce this danger.

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[1] THE LANCET Feb 14th (p 475) and 28th (p. 611) and March 7th (p 68[illegible]) and 21st (p 837) 1903

[2] P Manson: *Tropical Diseases* p 607

[3] Made with soloid [illegible] perchloride (B and W) and the boiled filtered water of doubtful character

In the borough of Woolwich, with very few exceptions, the licensed victuallers have posted up in their bars notices requesting customers not to spit on the floor, but they say that at present they are powerless to enforce such notices. A by-law would effectually strengthen their hands. I venture to say that any by-law against spitting which does not apply to public-houses will produce but an insensible effect in the diminution of tuberculosis.

I am, Sirs, yours faithfully,
SIDNEY DAVIES,
Woolwich, May 12th, 1903. Medical Officer of Health.

CERTIFYING FACTORY SURGEONS.

To the Editors of THE LANCET.

SIRS,—It has been pointed out to me that my letter of May 9th might infer an intention on the part of our association to take advantage of the Home Secretary's presence at the annual dinner to elicit an expression of opinion on the question of fees paid to certifying surgeons. As I must acknowledge the possibility of such an interpretation I take the first opportunity open to me of disclaiming any such intention, anything of the kind indicated being so obviously out of place at a purely social function. The view I expressed in the last sentence was purely a personal one of general application and not to be regarded as authoritative.

I am, Sirs, yours faithfully,
W. F. DEARDEN,
Honorary Secretary, Association of Certifying Factory Surgeons.
Manchester, May 11th, 1903.

"GOUTTES DE LAIT."

To the Editors of THE LANCET.

SIRS,—Perhaps you would be so good as to devote a few lines of your valuable space to informing your readers that at a meeting of the staff of the Royal Hospital for Children and Women held on May 4th the following motions were unanimously carried :—

1. That this committee approve of the principle of an infants' milk depôt.
2. That if the borough council establish a depôt in the immediate neighbourhood of this hospital the staff will do what they can to induce patients to use it.

These resolutions were approved by the committee of management at a meeting on May 5th and the secretary was instructed to prepare a petition to this effect to be laid before the borough council of Lambeth.

I am, Sirs, yours faithfully,
J. HOUSTON, Secretary.
Royal Hospital for Children and Women, Waterloo Bridge-road, S.E., May 7th, 1903.

THE AERIAL CONVECTION OF SMALL-POX.

To the Editors of THE LANCET.

SIRS,—I should feel much obliged to any of your readers who would furnish me with the reports upon, or well-authenticated examples of, the spread of small-pox around small-pox hospitals by aerial convection. The well-known cases of the Fulham Hospital, the Sheffield, Bradford, Warrington, and Glasgow reports, as well as Dr. J. C. Thresh's recent interesting example, I am, of course, already acquainted with. In connexion with this request I may express a hope that the Local Government Board may eventually see its way to publish annually a *résumé* of the many valuable annual reports furnished by the medical officers of health throughout the country. The Board receives a copy of each, but many of these reports are not printed and even then they are not obtainable ; moreover, it would be practically impossible to read them all. THE LANCET gives interesting reviews on the most important cities ; this does not, however, meet the need I with others feel of an annual volume giving a *résumé* of the experiences in sanitary problems. Some years ago I wrote to THE LANCET advocating such a publication by the Local Government Board and subsequently Dr. Paget informed me that he had already done so. Perhaps I may also mention that the late Sir Richard Thorne, chief medical adviser to the Local Government Board, wrote to me that the proposal had his most cordial good wishes but that he feared the expense of such a publication would stand in the way. The financial loss to the Government would, however, be well repaid by the educational gain to the medical officers of health. The solution of many important public health questions is at present retarded by the difficulty of obtaining the experiences of other workers.—I am, Sirs, yours faithfully,

ANTONY ROCHE, M.R.C.P. Irel.,
Professor of Public Health, Catholic University Medical School.
Dublin, May 10th, 1903.

"RETURN" CASES OF TYPHOID FEVER (?).

To the Editors of THE LANCET.

SIRS,—I write rather to elicit than to contribute information on a subject of considerable practical importance. While it has long been known that the exit of a scarlet fever patient from hospital is occasionally followed by the admission of other cases from the home to which that patient has returned, I am not aware that definite statements can be made as to the period at which cases of typhoid fever cease to be foci of contagion and sources of real danger to the community. A patient, A, for instance, is admitted to hospital with anæmia and after nearly three weeks' residence the temperature rises and typhoid fever develops. In the ward are two patients, B and C, convalescent from typhoid fever. On the day of A's admission B is in her third week of normal temperature and C in her fourth week. A is said to have been in close proximity to B. Had B or C gone to A's home and A been admitted three weeks later with symptoms of typhoid fever, A must, I think, fairly have been considered as a "return" case. And yet medical officers of health assure me that such cases are practically unknown and that their experience shows that during convalescence typhoid fever is not transmissible. On the other hand, I notice that Professor Osler (fourth edition of his "Principles," p. 31) states that "bacilli may be present in the urine for years after the attack" and mentions that "during 12 years 20 physicians, nurses, or patients contracted the disease in his wards" (p. 5). Presumably, from the large number of cases under Professor Osler's care, none of these patients contracted the disease from a convalescent.

I am, Sirs, yours faithfully,
A. A. WARDEN,
Physician to the Hertford British Hospital, Paris.
Paris, May 6th, 1903.

THE STUDY OF VENTILATION.

To the Editors of THE LANCET.

SIRS,—Many years' practical experience as a sanitary engineer induces me to ask you kindly to insert this letter suggested by Brigade Surgeon-Lieutenant Colonel D. Boswell Reid's communication in THE LANCET of May 2nd, p. 1264. I fully agree with him that fire is the best purifier of contaminated air and assert that the simpler the method of governing the movements of air the better is it for all concerned. It is unfortunate, I think, that in this country a great many people appear to hold exactly the opposite view, forgetting to bear in mind the great difficulty—I had almost written impossibility—of controlling the movement of air, which is, say, 12 feet above the floor level. Ventilation and warming should go hand in hand and one and the same person, I maintain, should provide for both requirements, and I am more convinced than ever that it will be found that properly constructed fireplaces with simple open fires will give the best result from both the point of view of comfort and that of health.

I was informed quite recently that in order to provide a permanent system of reliable and beneficial ventilation the London School Board have out of nearly 300 schools scarcely two schools with the same system, while in the infant schools the best results are obtained with open fires. A very interesting annotation in THE LANCET of Feb. 28th,

p. 604, drew your readers' attention to evils arising from cooking meat in the oven of a close fire range and the loss people suffer by not using an open fire for cooking meat, &c., in front of it. It is impossible to roast properly in front of a close fire range and there is scarcely a house in which close fire ranges are used but that the atmosphere at the time of cooking a joint gives immediate knowledge of the fact directly one enters the house. I do not despair, however, of seeing at no distant time an open fire range that shall be economical in use in every way and free from the reproach of committing a sin against the cleanliness and purity of the air. I trust that further contributions will be made to THE LANCET upon this very important subject.

I am, Sirs, yours faithfully,

May 5th 1903. D. T. BOSTEL, Senr.

FREE ANTITOXIN TO THE MEDICAL PROFESSION.

To the Editors of THE LANCET.

SIRS,—With reference to remarks which have recently been made in THE LANCET *re* the above I should be glad if you will allow me to say that, so far as I know, the urban sanitary district of Swinton and Pendlebury was the first in this country to adopt the practice of gratuitously supplying antitoxin to its local medical practitioners, such course having been taken upon my recommendation early in the year 1901.

I am, Sirs, yours faithfully,
SAMUEL HOSEGOOD,
Swinton, Manchester, April 29th, 1903. Medical Officer of Health.

⁂ In our issue of May 2nd we published a letter from Mr. E. C. Bousfield stating that nearly six years ago the then vestry of Camberwell commenced the free distribution of antitoxin.—ED. L.

JACOBI'S ATLAS OF SKIN DISEASES—SMALL-POX AFTER VACCINATION: A CORRECTION.

To the Editors of THE LANCET.

SIRS,—May I request you to insert in your esteemed journal the following remarks which I feel obliged to make in reply to Dr. C. Killick Millard's letter published in THE LANCET of April 25th, p. 1197, under this heading? I regret my delayed reply which has been due to Dr J. J. Pringle's illness.

Dr. Millard's criticism refers solely to Plates XXXV*a*–XXXV*c* and the corresponding text which have been added by Dr. J. J. Pringle without my knowledge and authorisation. For this reason I refrain from any comment on Dr. Millard's unkind references to the "German author" and refer him to the "English translator."

I am, Sirs, yours faithfully,
Professor E. JACOBI,
Director der Dermatolog. Universitats-Klinik.
Freiburg-i.-Breisg., May 12th, 1903.

To the Editors of THE LANCET.

SIRS,—I am greatly indebted to you for the kind review of the Portfolio of Dermochromes by Professor Jacobi, for the English adaptation of the text of which I am responsible. The statement which you indicate in the addendum which I made to Professor Jacobi's text, that variola does not occur in people who have been vaccinated, is, *I admit, too* absolute and will be amended in the second edition.

I am, Sirs, yours faithfully,
Lower Seymour-street, Portman-square, W., J. J. PRINGLE.
May 13th, 1903.

CONICAL CORNEA.

To the Editors of THE LANCET.

SIRS,—The recently circulated *brochure* by Sir Anderson [illegible]

evidently not equalled by his knowledge of the literature of the subject and with a little trouble he might have ascertained what others had done in the same field with the cautery long before the date (1895) of his communications to the medical press. If he will only turn to the *British Medical Journal* of Feb. 23rd, 1889, he will find a short paper read before the section of ophthalmology at the Glasgow meeting of the British Medical Association in the previous year, in which I refer to the works of the late Dr. E. Andrew and Mr. W. J. Cant on the use of the cautery and in which it is stated that "the plan adopted by these operators differs in at least one important point from the method employed in the cases which I am about to relate. The essential difference consists in the fact that the two surgeons named make a point of opening the anterior chamber so as to allow a continuous drainage of the aqueous for a prolonged period and so purposely use a needle capable of penetrating the corneal tissue; whereas I hold that complete penetration of the cornea with the discharge of the aqueous is a *result to be avoided* as unnecessary and dangerous, and believe that the same object as regards the reduction of conicity can be attained without the escape of the fluid." Yet, Sir Anderson Critchett says in his pamphlet that "till about three years ago the universally accepted plan of applying the cautery in cases of conical cornea was to use it almost at red heat and to *persevere until a spurt of aqueous showed that the anterior chamber had been penetrated.*" My first case was operated on in 1886—14 years before the time mentioned by Sir Anderson Critchett. I do not think therefore that he can claim either priority in, or "initiation" of, this method of treating conical cornea, and I am sure that he would be the last willingly to deprive benighted [illegible]

Liverpool, May 11th, 1903. RICHD. WILLIAMS.

SUBSTITUTION IN THE SPIRIT TRADE.

To the Editors of THE LANCET.

SIRS,—From the answers given by the Chancellor of the Exchequer in reply to questions by Mr. T. M. Healy on Thursday last it is apparent that the dangers attendant on the use of promiscuous materials in the manufacture of potable spirits, more especially of so-called "Scotch whisky," have not yet been recognised in official circles. The significance of Mr. Ritchie's statement that "no doubt beet molasses is used to some extent" may not be quite clear to many medical men at first sight and I therefore venture to trespass on your valuable space in order to explain the full bearing of his admission. Beet molasses constitute the residue or dregs of beet sugar manufacture; they differ from sugar-cane molasses in that they contain a very large percentage of substances of a basic and quasi-alkaloidal nature. The substances in question are fatty amines, bases closely allied to the ptomaines, and bases of the pyridine series. The percentage of these bases in beet molasses is so high that some of them or their derivatives are actually obtained on a manufacturing scale from this source. The poisonous nature of some of these bases is well known; it is further a matter of common knowledge that it is next to impossible to remove them completely from spirit by any known process. And yet the Chancellor of the Exchequer calmly admits that "no doubt beet molasses is used to some extent." Comment is needless.

In reply to another question put by Mr. Healy Mr. Ritchie gave a reply calculated to convey the impression that chemical analysis was not able to distinguish between various classes of spirit. This reply is, in my opinion—and I may say that I have a fairly extensive experience in this connexion—based on erroneous information and is to a great extent misleading. That chemical analysis cannot distinguish in *all* cases I readily admit, but is there any branch of food analysis of which the same may not be said? That it (chemical analysis) can distinguish in many cases between different spirits, particularly between patent still spirit and "all-malt" whisky, is nevertheless a fact which my own personal experience fully confirms. Quite recently I have examined several specimens which are described and blended in such a manner as to lead the purchaser to believe that they are genuine "all-malt" Scotch whiskys, and these, by the analytical figures alone, were plainly proved to be nothing of the kind. In several cases, also, I have been able, judging by taste and the analytical figures combined, not only to show that the articles were falsely described, but also to determine the material from which these spirits were manufactured. With a little research on the chemistry of whisky, together with a number of standards obtained by an examination of the greater number of the spirits actually produced and blended, it would, in my opinion, be by no means difficult to stop the nefarious traffic which is now proceeding. I inclose my card.

I am, Sirs, yours faithfully,

May 11th, 1903. "EXPERT."

A QUERY IN EMBRYOLOGY.

To the Editors of THE LANCET.

SIRS,—I should be much obliged if any of your readers could throw some light on the following occurrence. A blue Persian pedigree she-cat was sent to an equally pure-bred tom of the same species on Feb. 20th. She remained there from the 20th (a Friday) till the following Monday, the 23rd, and, according to the owner of the sire, was served at least twice. Her kittens would have been due on or about April 27th. On the day after her return home she was seen in the garden in company with a black-and-white tabby tom. Pregnancy duly went on but the kittens were born on May 2nd. They were six in number and were all coarse-made, big-boned, and black-and-white. Was she impregnated by the blue tom? If so, was a second impregnation effected by the black-and-white tom and could the spermatozoa of the latter have destroyed those of the blue tom? Or was it simply a case of "maternal impression"? Or was there no impregnation by the blue tom and an ordinary impregnation by the black-and-white? Why was delivery delayed nearly a week? I may add that the cat has been put to the same blue sire on two previous occasions and has had two perfectly coloured blue litters as the result.

I am, Sirs, yours faithfully,

May 11th, 1903. OXON.

A POINT IN THE SELECTION OF THE HONORARY MEDICAL STAFFS OF PROVINCIAL HOSPITALS.

To the Editors of THE LANCET.

SIRS,—The question as to the desirability or otherwise of honorary members of the medical and surgical staffs of provincial hospitals (other than cottage hospitals) being in partnership together is one which arouses interest in certain towns and one on which an opinion from THE LANCET would be of service. In the case of the large hospitals in London and the larger cities no such thing is now possible, I believe, whilst in the more important provincial hospitals there is a rule prohibiting such partnerships. The question arises particularly in such cases as the following. A small town develops in the course of time into a large one, the centre of a district. In the first place, a small hospital or dispensary has arisen, worked by two or three medical men. With the growth of population and importance this has evolved into a comparatively large infirmary; and the staff, whilst still maintaining the status of general practitioners, are exceptionally favoured in public estimation. There then develops, naturally, a tendency on the part of the staff to work the institution for their own private benefit and to keep out outsiders. Having almost complete influence with the committee of governors, many of whom know nothing of medical matters, this can often be done. Rules are framed which put difficulties in the way of outsiders, whilst a partner or relation of one of the staff may be afforded exceptional facilities. Undoubted abuses occur. I know of one case where a firm of three members practically managed a county infirmary for many years and were enabled in this way largely to monopolise the general practice of the district.

It must be remembered that it is not by any means necessarily the best men in point of qualification who secure these appointments, though possibly after years of experience obtained from the appointments they may eventually become so. Also, the staff are in open rivalry as *general practitioners* with their less favourably placed brethren around. Thus arises much jealousy, so that outside practitioners often prefer to send their patients to an infirmary at a distance rather than to the one at home, so impairing the usefulness of the institution. It appears to me that by adopting a rule prohibiting the system of partnership on the staffs of infirmaries much good would result in checking these evils. Of course, my remarks do not apply to cottage hospitals or to districts where a few medical men only are available, but to the larger centres of population with plenty of medical material ready and anxious to serve.

I am, Sirs, yours faithfully,

May 8th, 1903. M.D.

*** Undoubtedly the staff of a hospital ought to be selected on its merits. The rule that no two members of a firm should be upon the staff together might in many cases prevent nepotism even if, in a few cases, it might exclude the fittest candidate.—ED. L.

THE
FOURTEENTH INTERNATIONAL CONGRESS OF MEDICINE.

(FROM OUR SPECIAL CORRESPONDENT.)

THE HOTEL AND LODGING HOUSE SCANDAL.

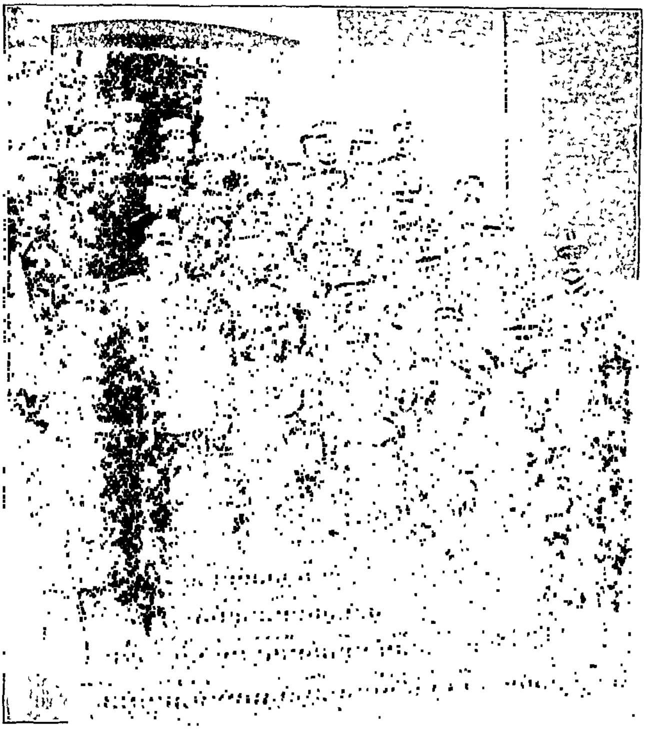
Madrid, May 4th.

IF only for the sake of future congresses and as a warning it is necessary to allude again to the question of hotel and lodging accommodation. This is the more indispensable as on the present occasion many regrettable incidents have occurred. The offices of the Congress have been disturbed by the sounds of violent quarrelling and protestation. Abusive words have been used and quite a scandal has been created. In such circumstances some explanation is necessary, particularly as rumour and gossip are apt to place matters in their worst light. As explained before, M. Ulrich Frei had been engaged by the organisers as a paid manager or clerk to look after the interests of the foreign members of the Congress. He had acted in a similar capacity during the congresses held in Paris in 1900. The work soon became terribly absorbing and had to be attended to night and day. The Congress was to meet at a most inappropriate date. First of all the Easter holidays, when it is the custom to crowd into the large towns, were scarcely terminated. Then many travellers were returning to Madrid from the Seville and other Easter fairs. The Congress met on April 23rd and on the 26th there were general elections throughout Spain and a general election always draws to the capital a large number of political wire-pullers and others. The executive committee of the International Congress of Medicine also clearly saw that more members would attend than had been expected. It was given to understand that the capacity of the hotels in Madrid would not suffice to accommodate so many persons coming to the capital for different reasons but at the same time. At this stage what seems to me to be a great blunder was committed. The executive committee should have washed its hands completely of the question of hotel and lodging accommodation or else should have kept the matter absolutely and in every detail under its own control. The safest course to pursue and that which is very generally adopted for similar congresses is to institute, many months in advance, an inquiry as to the number of rooms and the prices to be charged which the different hotel and lodging-house keepers think that they will have vacant at the date indicated. These details being printed should be sent to every member of the congress as soon as he notifies his intention of attending and then every member, without the intervention of any agency whatsoever, knows where to go or to write for rooms. The congress committee simply gives all the information it is able to gather. At most the committee stipulates with the hotel keepers that they will keep a certain number of their rooms free at the price mentioned and not make other contracts with agencies or individuals. If the committee does not content itself with merely giving information it will need much business capacity and very strict supervision before it can safely venture itself to supply the rooms. As I said at the time, to the "corner" in hotels formed by the travelling agencies the medical men had opposed a collective organisation of their own. This certainly would have been a very public-spirited and admirable thing to do. I was misinformed and like most members of the Congress I was deceived by appearances.

When the work became overwhelming for the reasons described above M. Frei asked the directors of the Congress whether he could as an individual and apart from the

Congress treat with a travelling agency for the supply of rooms to the members of the Congress. Trusting to M. Frei's well-known and established honour and above all believing that it would be of help to the foreigners who were coming to Madrid, the committee gave its consent to this arrangement. The one prevailing desire was to help the foreigners and to prevent their being exploited by the hotel keepers The idea was that the agency and not the Congress would ask members to state what sort of rooms they required and to send 50 francs in advance. The agency was then to go to the hotels and to treat for the rooms telling the hotel keeper to add to his usual charge 10 per cent. so as to cover the working expenses. This charge was made openly, there was no attempt to conceal the fact, but it was always held to have been done outside the Congress and not as part of the Congress management. This was the theory; what actually happened and other places to make inquiries an prices doubtless these poor touts stipulat for themselves as apart from what the The door was thus thrown open to all man

But now another blunder was commit the whole affair to grief. In all such ma tion success mainly depends on extreme method of procedure and in the reduction to a minimum. Instead of this and before Logements would consent to indicate to th where he might find a room he was called upo days' board and lodging in advance. In exc hard cash he got a number of green coupons. protested that he was not going to remain in M days; it was pointed out that there was on the c printed promise to the effect that the money wou returned for the coupons that were not used. As but fo



The military delegates at the International Congress of Medicine at Madrid. The photograph is taken at the entrance of the Military Hospital.

differed considerably. First of all no one imagined that what was denominated as the Service des Logements du XIVe. Congrès International de Médecine had nothing to do with the Congress. Then as the offices of this lodging service were on the same premises as the Congress itself this fact still further confirmed the impression that it was an organisation formed to protect the members of the Congress from the agencies and not itself an agency in disguise. Of course, this agency was not at all desirous to undeceive the members of the Congress. It was preferable to be considered as officially representing, and authorised by, the Congress. As the accommodation in the hotels did not suffice the agency advertised asking private people to offer the use of one or more rooms in their own homes. This brought a flood of answers, far more than was required. Then some men, miserably paid, were sent round to various small hotels the members of the Congress were likely to stay ten days this meant that the majority would have to waste some of their time and the time of the clerks or cashier in getting such portions of their *money* back. *Then there* was the difficulty of changing foreign money into Spanish. However, these were but inconveniences. The first serious difficulty was that the prices charged were not at all cheap, as the members of the Congress had been led to expect. Then when on being shown their rooms and experiencing the accommodation received members of the Congress complained of the exaggerated charges the landlord might, perhaps, explain that he did not receive as much as the charge made for the coupons. *A member* of the Congress who had come from New Zealand was very bitter. He told me that it was materially impossible for anyone to come a greater distance to attend the Congress. No notice had been taken of this fact or that on was delegated by a university. He had not been invited st where and was left to the tender mercies of the Service of s Logements which had provided him with a room for 9 pesetas per day. It was not particularly clean, the service was very insufficient, but he was not going to complain because his landlady was very obliging, did her very best, and was receiving only 15 out of the 20 pesetas that he was paying.

This state of affairs did not last long; the proprietor of a hotel, finding that his visitors were grumbling at the heavy charges, betrayed the whole situation. He said that he was quite willing to accept much less if the payments were made in cash instead of in coupons. Anxious to please his visitors he advised them, to go to the Congress office, to get reimbursed for their coupons, and then to deal directly and at a cheaper rate with him. No sooner had one hotel keeper done this than others thought themselves obliged in self-defence to follow his example. Then lodging-house keepers and others began to do the same thing. Thus suddenly and unexpectedly a tremendous rush took place and a very large number of members of the Congress wanted to be reimbursed for their coupons. Of course, this was unexpected. Measures had been taken to reimburse the value of a limited number of coupons but a wholesale rush of this description had not been anticipated. At first the claims were readily met but after a while the money in hand ran out and a panic ensued. A story got about that coupons had been forged and that money had been given to the bearers of false coupons. It was even stated that 7000 pesetas had been obtained in this manner. Now the lodging-house keepers got alarmed and some refused to accept the coupons and in one or two cases threatened to turn their visitors out. Thus there were some members of the Congress who cou d'neither get reimbursed for their coupons nor lodged for them. They were therefore obliged to pay twice—once for the coupons and once again in cash to their landlords. It may well be imagined that such a situation became intolerable. An appeal was now made to the Governor of Madrid who sent a commissioner of police to make inquiries. But the commissioner of police did not find anything wrong. No forgeries whatsoever had been committed, no false coupons had been presented, and no claims had been discarded or payments refused. At one moment the management was short to the extent of 7000 pesetas; the payments ceased for a while till this amount could be procured, but there were no repudiation of any liability entered into and no reason for arresting anyone. Inquiring of the secretary-general of the Congress I was informed that every penny would be reimbursed. The honour of the country is engaged and not a penny will be withheld. But all the same big blunders have been committed and these are all the more regrettable as nothing could have been more cordial, more obliging, or more courteous than the general disposition of all the Spaniards connected with the Congress. No people could possibly have been more anxious to please. Business ability and foresight were evidently wanting; kindness of heart and good feeling were there in abundance.

THE SECTIONS.

MEDICINE.

At the meeting of this section on April 28th a paper was read by Dr. **JULIUS GUEZDA** of the clinique of Professor Leyden in Berlin, on "Salocreol." Salocreol, he said, was a preparation which was derived from beech tree tar and which contained all the various phenols of this tar combined with salicylic acid. It formed an oily fluid insoluble in water but readily soluble in alcohol or ether. By the action of alcohols as well as by the organism salocreol was saponified into its components, one of which (salicylic acid) appeared in the urine as salicyluric acid, the presence of which could easily be proved with ferric chloride, when a violet colouration occurred. The primary idea in producing salocreol was to obtain a compound which could be applied *locally* in acute rheumatism. It was thought that the untoward effects of salicylic acid on the heart and kidney would be diminished if the salicylic acid were at the moment of penetration through the skin to combine at once with the glycocoll of the proteids of the rheumatic exudation. As the beneficial effect of phenol injections into hydroptic joints was a well-known fact, so there could be well expected an increased action by a combination such as salocreol. The trials with salocreol which were performed in the clinique of Professor Leyden at Berlin gave very good results and while in regard to acute rheumatism affecting the joints sufficient experience had not been obtained, there was observed a very prompt action of salocreol in cases of erysipelas. The patients experienced in the parts affected by erysipelas an immediate relief as regards the tension of the skin and there were cases in which the utterly closed eyes could be partially opened in 12 hours. If the tissues in the immediate neighbourhood of the part affected with erysipelas were treated with salocreol the spreading of the erysipelas could be stopped. Large doses were advantageously administered on the first day of treatment at intervals of two hours during the day-time. Salocreol had a marked effect in reducing swollen glands and cases of lymphadenitis after measles, scarlet fever, and diphtheria were improved in a remarkably short time. Similarly good results were obtained in cases of scrofulosis.

Dr. **ARNOLD LORAND** (Carlsbad) read a paper on the Relations between Diabetes, Acromegaly, and Graves's Disease. These three diseases had many common features. They could be caused by the same agents—infectious diseases, mental emotions, &c. Traumas (nervous shock) could not only cause diabetes but also Graves's disease, and even cases of acromegaly had been reported after accidents. Glycosuria, polyuria, polydipsia, and polyphagia might appear in any of them. In these three diseases there could be found changes in the vascular glands: in Graves's disease in the thyroid gland, in acromegaly in the hypophysis (anterior lobe), and according to the last researches of Opie, Weichselbaum, Hoppe-Seyler, and others in nearly all cases of diabetes there could be found alterations in the vascular islands of Langerhans in the pancreas. These islands constituted a vascular gland of the type of the thyroid or the hypophysis. The pathological alterations in one gland produced also alterations in the other glands. Thus changes in the pancreas produced changes in the thyroid gland, and alterations in the thyroid gland might, *vice versâ*, produce changes in the pancreas. In Graves's disease (hyperthyroidea) glycosuria was very frequent and even true diabetes was not uncommon. According to the researches of Dr. Lorand glycosuria existed in acromegaly when there were symptoms indicating a hyperactivity of the thyroid gland. Glycosuria or diabetes was only present in such conditions where there existed also a hyperactivity of the thyroid gland. This was the case after infectious diseases in which, according to the researches of Roger and Garnier, there existed very frequently a hypersecretion of colloid substance, this being confirmed by Torri. It was equally so after mental emotions, after certain poisons and drugs, which according to Roger and Garnier could also cause a hypersecretion and even later an exhaustion of the gland. The glycosuria of chlorotic persons and the glycosuria which occurred in syphilitic subjects, as a rule observed only in women, depended upon the swelling of the thyroid which had been observed only in women by Engel Reimers. Lactosuria and diabetes, which might appear sometimes during pregnancy, depended upon the hyperactivity of the thyroid in this state. At the end of lactation and pregnancy they might disappear with the exhaustion of the gland. The glycosuria which sometimes appeared in cholelithiasis depended upon the hypersecretion of the thyroid observed by Hürthle in stagnation of the bile. It was a fact that extracts of thyroid gland might produce glycosuria and even diabetes. On the other hand, glycosuria was absent in all states of inactivity of the thyroid gland. It was never present in myxœdema (athyroidea). It was missing in hereditary syphilis, for in these cases there was an inactivity of the thyroid gland (retardation of growth). It was nearly always absent in cancer and tuberculosis, for in these diseases, as Dr. Lorand had established in another communication to the Congress, there existed an inactivity (atrophy) of the thyroid. The disappearance of glycosuria by the treatment with opium and shortly before death depended upon this fact. Diabetes was uncommon in children but so also was hyperthyroidea (Graves's disease). The prognosis of diabetes was better in advanced age (inactivity of the thyroid). The few rare cases of cured diabetes had occurred mostly after infectious diseases—syphilis, influenza (Holsti), scarlet fever (Zinn). As Roger and Garnier had proved there could be brought about in infectious diseases a complete exhaustion of the thyroid after a preceding hypersecretion. Dr. Lorand came to the conclusion that these three diseases were in very close relation to one another; pathological alterations were found in several vascular glands, in diabetes pancreas and thyroid gland were affected; hyperactivity of the thyroid gland could bring about diabetes especially when there were simultaneous changes in the pancreas.

Dr. HUERTAS BARRERO and Dr. GUSTAVO PITTALOGA brought forward a report upon the Causation and Prevention of Paludism. They agreed as to the relationship between mosquitoes of the genus anopheles and malaria The clinical manifestations of malaria were produced by three parasites which *must be looked upon* as three [illegible] ere distinct and not [illegible] three species were: [illegible] which caused quartan fever; (2) plasmodium (hæmamœba) vivax, causing tertian ague; and (3) laverania malariæ (hæmamœba præcox and hæmamœba immaculata) which gave rise to the severe æstivo-autumnal fever with its malignant forms. The relation of relapses and the epidemic season (June to December) had acquired an extraordinary importance of late years, for they seemed to point to the fact that parthenogenesis might play a part in their occurrence. There might, for instance, be a direct reproduction of sexual forms of micro-organisms in the blood of malarial patients, such reproduction occurring after longer and later periods and sometimes even after very long intervals from the apparent cure of the original fever, the macrospore, or female element, preserving the power of reproducing by division in the internal organs of its host, the results of the division giving rise to new generations of sporozoites. But the most important conclusion to be deduced from this theory of parthenogenetic relapse *is the possibility of the* rapid and multiple infection of innocent anopheles which happen to bite during June and July. These mosquitoes became infected with the sexual forms of the malarial parasite in the blood of old malarial patients and it was only from the parasite in this stage that a new generation of sporozoites could be developed in the mosquito's stomach. *The prevention of malaria was considered* under the headings of (1) destruction of the larvæ of the mosquito, chiefly by petroleum; (2) the improvement by drainage of malarial soils; (3) mechanical prophylaxis consisting in the protection of houses in a malarial tract by a fine metal meshwork, whilst the individual was protected during twilight and the night by mosquito nets, gloves, and veils; and (4) therapeutic prophylaxis consisted in the methodical care of all patients suffering from malaria whether of old or of recent standing—the prevention, in the strictest sense of the word, of malarial attacks by daily doses of quinine, such doses being given to everyone who was exposed to infection during the epidemic season.

SURGERY.

Dr. TRUMAN W. BROPHY (Chicago, Ill.) read a paper on the Surgical Treatment of Congenital Clefts of the Palate in Infants. He said that he was well aware that many eminent surgeons did not favour operations in early infancy for the cure of cleft palate and that few, comparatively, were familiar with the methods that he had devised and practised, but it was gratifying to realise that many who formerly questioned his method were now most enthusiastic advocates of it. The question of early operations had with him (Dr. Brophy) *passed the experimental stage*; an experience extending over a period of 20 years, with a careful examination of patients upon whom he had operated, was satisfactory evidence that the most desirable time in life to operate for congenital cleft of the hard palate was within five months of birth, preferably within three months, and this conclusion was based upon the results of clinical experience Some of his most satisfactory results were obtained in infants from ten days to three weeks of age. The operation was made by forcing the maxillary bones together, bringing the edges of the fissure in contact and securing union Among the reasons why he believed that early operations were most desirable were: 1. Surgical shock was less because the nervous system of a young child was not well developed and it was not therefore capable of receiving the same impressions that it would later in life; besides, young children usually reacted better. Hæmorrhage was very slight; moreover, all mental impressions were eliminated, it being well known that alarm and dread were amongst the most powerful factors in producing shock. *The operation* should be made upon the palate before that upon the lip It was a great mistake to commence at the oral opening and partially to close the only aperture through which a subsequent palate operation must be made. The surgeon needed all the space that could be secured, which was none too much in a small child. The lip operation was comparatively simple and trivial and it could be performed at any time, but the palate operation was made much more difficult if prior to that the lip had been closed. Should the intermaxillary bones protrude they must not be removed but should be carried back into their normal position. 2. Before the bones were fully calcified *they might be bent or moved without fracture. Bone* at birth was about one-half organic matter, hence the injury was really less in closing a cleft than it would be if the calcification were more complete. 3. If the muscles were very early brought into action they developed instead of atrophied and hence a good velum was secured with plenty of tissue, whereas if the operation was undertaken later in life, after the parts were shrunken through non-use, they could rarely be made to subserve the same service that organs which developed through natural employment could be made to do. It was well known that muscular tissue was more perfectly developed through action; in instances of cleft palate none of the muscles of the velum could be normally employed when the parts were not united and hence they remained in an immature condition through life. By operating at a very early age they were at once brought into use and their development was proportioned to that of other tissues. When the palatal processes of the maxillæ were united the development of the bones of the alveolar processes of the upper jaw assumed a form nearly or quite normal and when the teeth were erupted they would meet the lower ones or nearly so when the mouth was closed. The method described enabled them to restore in early infancy the normal relations of the superior maxilla and consequently the proper relation of the upper to the lower maxillary bone. In patients not having sufficient bony tissue to enable him (Dr. Brophy) to close the cleft by this operation without contracting the arch he *found rather to his surprise that as time went on the bones* developed and the arch spread until, when the upper teeth were erupted, they nearly, or quite, occupied the normal relation to the lower ones. 4 Following early operations there was much less deformity, for all the tissues, bony as well as soft, developed naturally and according to accepted types. When the operation was postponed for a few years it was very difficult to secure such results. 5. When the operation was made in early infancy the tissues united, the nasal accent did not develop, and speech was normal when the time came for learning to articulate. If the operation was not made until faulty habits of speech were acquired it was with difficulty that they could be overcome, even though the muscular parts were made sufficient. The method of procedure in operating for the closure of congenital cleft palate in a young child would, he added, be fully described and illustrated in the printed Transactions [illegible]

[illegible] the British Orthopædic [illegible] e *Treatment of Hallux* [illegible] hat for some time past there had been a movement in England in favour of allowing the human foot to develop its normal shape. Children were allowed to go barefooted or to wear sandals and adults who had arrived at years of discretion preferred comfort in walking *to the fashionable shapes of foot-covering. Comfort in* walking largely depended upon the perfectly normal condition of the foot, every part of which ought to perform its allotted function. The deformities to which he had to call attention were due almost always to interference with the special function of each toe by ill fitting boots. His paper did not discuss the question of ill-fitting boots but it was intended to describe the methods of correcting the deformities produced by them. The most important of these were hallux valgus and hallux flexus. These two deformities had mutual relations and most frequently the two were present in the same foot. In elderly adults it was not desirable to interfere by means of operative surgery to correct such deformities unless they were producing pain or other inconvenience It was only necessary for the patient to wear the most comfortable boots he could obtain and to treat any gouty condition which might be, and frequently was, present by suitable medical remedies. When operative interference was required for hallux valgus the best proceeding *was to take a wedge of bone from the metatarsal* bone of the hallux. An elliptical piece of skin was removed which must be made to include the bunion usually present in these cases and then a wedge was without difficulty removed from just above the articulation of the metatarsal with the phalanx. When the cut surfaces of the bone were applied to one another the inner margin of the foot should be in the same line with that of the toe; all bleeding being arrested the skin margins were brought together and the foot was fixed in an immobile apparatus. It usually healed completely before the apparatus need be removed. Hammer-toe or flexus digitus pedis was a painful affection and so unsuccessful had treatment been that some surgeons preferred amputation to any less severe method. Although Mr. Thomas had amputated in many cases further experience had convinced him that it was very rarely necessary. The second digit was most frequently affected where there was only one deformed hammer-toe. Next in frequency came the fourth but sometimes the whole of the toes were bent and so severely that the patient walked on the nails. In such cases no one would dream of amputating all the toes and treatment by other means was usually successful. If then they could treat multiple hammer-toe without operation they certainly ought not to require such a severe measure for one. Hammer-toe, when confined to the second digit, was nearly always associated with hallux valgus and many ingenious appliances had been devised for the correction of both. Mr. Thomas explained a simple appliance for the combined treatment of hallux valgus and hammer-toe which had proved of great value in his hands not only in these conditions but also in correcting deformities of the toes generally. He called it the "tomato splint." It was constructed of dentist vulcanite, aluminium, wood, brass, celluloid, or any other non-irritating material, in sizes which readily adapted themselves to the individual foot. Formed of one of the above materials it served as a splint, fitting to the under surface of the toes and affording a groove in which each toe lay in the normal position. The posterior border was concave and rested against the heads of the metatarsal bones. The upper surface had three grooves, one for each of the three middle toes, and two half grooves for the great and little toes. Between the grooves were raised septa, the one between the great toe and the next being higher than the others, and the septa were pierced so as to allow the strapping, tape, or elastic by which the splint was fixed to the toes to pass through. In using the splint it was only necessary to apply it to the under surface of the toes and to fix it not too tightly with strapping, an elastic ring, or piece of narrow bandage. It might be worn at night inside a stocking, in a slipper or loose shoe during the day, or even in a boot if the boot had room enough to contain it with comfort to the foot. With this splint much might be done to correct deformities of the toes—no severe or painful measures were required; properly applied and regularly worn it gradually brought some of the most distorted toes to the normal condition.

Dr. J. M. **Bartrina** read a paper on the Alterations in the Shape of the Urethra in Hypertrophy of the Prostate and described a new catheter for prostatic cases. He pointed out that in hypertrophy of the prostate the urethra was not strictured but its shape was altered. The prostatic urethra was enlarged and in some cases to such an extent as to be mistaken for the cavity of the bladder, but this was very exceptional. It was, however, not at all rare to find a prostatic urethra measuring several centimetres in its antero-posterior diameter. This alteration in the shape of the urethra depended on the hypertrophy of the prostate. If the middle lobe was enlarged the urethra became bent and if the lateral lobes were hypertrophied the urethra was flattened, but this flattening was always present, for the hypertrophy was never limited to the middle lobe. This opinion was also maintained by Albarran and Motz. Sometimes the lateral lobes were unequally hypertrophied and then the lumen of the urethra might have various forms and in section it might resemble a cross or an italic *f*. From these facts it was easy to interpret the cause of the difficulty of catheterism in cases of hypertrophied prostate and this cause was not the bent form of the urethra, for if it were so and the catheter were to follow the upper wall of the canal it should infallibly enter the bladder. The real cause was the flattening of the urethra and therefore the catheter for a case of hypertrophied prostate must be suited to a flattened urethra. Dr. Bartrina had had made a catheter flattened from side to side with a sharp upward turn near its apex. In practise the catheter had been a great success in prostatic cases, passing easily in cases where the greatest difficulty had been experienced with ordinary catheters, and a urethra which had only allowed the passage of a No. 14 or 16 (French) catheter would admit readily a No. 23 or 25 flattened catheter.

Professor **Cesare Ghillini** (Bologna) read a paper on the Treatment of Club-foot. He confined himself to congenital equino-varus, the commonest and the most interesting form. He was inclined to attribute this deformity to intra-uterine pressure acting on the fœtus. Club-foot was generally due to the soft parts, for the bones were only slightly deformed. Professor Ghillini then reviewed the different operative methods of treatment and expressed the opinion that club-foot was always curable whatever the degree of deformity or the age of the patient. He described his own practice. In cases seen shortly after birth manipulation was employed; later forcible manual correction; and when this failed he performed about the end of the first year of life Phelps's operation (tenotomy of the tendo Achillis and division of all the soft parts opposite the medio-tarsal articulation) and, if necessary, he opened this articulation. The orthopædic surgeon had two indications: firstly, to remove the obstacles to correction and as these were chiefly the soft parts they must be divided; and, secondly, to maintain the correction by the application of a plaster-of-Paris splint and to keep it on sufficiently long. In one case Professor Ghillini had kept a plaster-of-Paris splint on for seven months. If necessary the splint could have an aperture opposite the wound to allow of the application of dressings. The results had always been satisfactory both as to shape and to function. He was inclined to avoid all operations on the bones, for talipes equino-varus was "an affection of the muscles rather than of the bones."

Dr. R. **Harvey Reed** (Rock Springs, Wyoming, U.S.A.) read a paper on a New and Practical Method of Anchoring the Kidney. Dr. Reed made a longitudinal anterior incision immediately over the middle of the normal position of the kidney. The incision was two and a half inches long, or more if necessary, and was carried through the substance of the abdominal wall and entered the peritoneal cavity. The intestines were held aside, the small bowel being drawn to the opposite side and the colon outwards, so as to enable the operator to get at the kidney which was then brought to its normal position. Two straight needles, seven inches long, were then taken and the ends of a silkworm-gut ligature were passed through the eyes of these needles. One needle was then passed through the posterior peritoneum and the kidney and then immediately above the twelfth rib through the muscles of the back and skin. The second needle was inserted one inch from its fellow, but on the same level, and passed through the same structures. The needles having been brought out at the back were unthreaded and the suture was then tied over a piece of gauze. Care was required to see that no intestine was included within the loop of suture in the abdomen and it was also important that the suture was not tied too tightly. The abdominal wound was then closed. In about 14 days the suture was removed and in another fortnight the patient might go about. The operation was very simple and easy to perform. Permanent adhesions formed which fixed the kidney in its position. Dr. Reed had had 30 cases in which he had performed this operation and 29 of them were successful, and no deaths occurred. In the unsuccessful case the kidney became moveable some six months later and needed a further operation.

GYNÆCOLOGY.

Dr. A. **Lapthorn Smith** (Montreal) read a paper on Cancer of the Uterus. He held that the present results of treatment were extremely unsatisfactory and if any better results were ever to be obtained it must be by general practitioners recognising the condition at an early stage. The earliest symptom was irregular hæmorrhage from the uterus, especially after coitus, and especially in women who had passed the menopause. Every patient with such hæmorrhages should be examined and if the cervix was found torn it should be sutured as soon as possible, for Dr. Lapthorn Smith held that if every torn cervix were sutured within a year of the accident cancer of the cervix would not occur and that cancer of the cervix was increasing in the countries where this precaution was not taken. In his own practice every tear of the cervix was sutured as early as possible and cancer was very rare. As soon as the disease was suspected the uterus should be removed. He held that cancer was not in the least hereditary but very contagious and that when this belief was general it might be possible to do away completely with cancer.

Dr. J. L. **Faure** (Paris) read a paper on the Technique of Abdominal Hysterectomy. He maintained that the methods and details of abdominal hysterectomy must vary with the individual case and that if the surgeon did not adapt his method to the special conditions present unfortunate results might follow. Apart from cases of malignant disease, partial hysterectomy was always to be preferred to total removal of the uterus, even if it were only for the greater ease in arresting hæmorrhage. In malignant disease the whole uterus and the upper part of the vagina should be removed, if in any way possible. The vagina should not be divided until the uterus had been completely isolated from surrounding parts and especially from the ureters and this dissection could only be carried out with safety by dissecting slowly on each side from the fundus of the uterus downwards. In all other cases partial hysterectomy was sufficient. The cases divided themselves into two classes: cases of fibromata of the uterus and cases of affections of the appendages, for when these diseases and tumours of the uterine appendages were bilateral hysterectomy was often necessary. Dr. Faure laid it down as an important principle in partial hysterectomy that whenever possible it was better to separate the uterus and its annexes from their attachments from below upwards. This was very easy in the case of fibromata. If the fibroma was moveable and could be turned forwards a cut with scissors posteriorly at the level of the isthmus separated the cervix from the body and the uterus was only held by the broad ligaments. The right hand passing between the cervix and the body picked up the right broad ligament and it was clamped and divided with scissors. The uterus was then turned to the left and the left broad ligament was seized, clamped, and divided, and the uterus was thus removed in a few seconds. This was hysterectomy by "primary section of the cervix." If the fibroma was fixed by being adherent posteriorly primary section of the cervix could be performed from before backwards, and thus an operation was rendered easy which by any other method would be very difficult. If the uterus could not be drawn up and the cervix was therefore inaccessible Kelly's method was the best—that was, passing from above downwards through one broad ligament and then dividing the cervix. It was, however, especially in cases of affections of the annexes in which hysterectomy was justifiable that the method employed must be varied according to the conditions present. Where possible primary division of the cervix was the best, but if adhesions were present on one side Kelly's method should be used. If, however, extensive adhesions on both sides rendered this impossible the method Dr. Faure advocated was to make a mesial incision through the uterus from the fundus to the cervix; then each half of the cervix was divided and the broad ligaments were attacked from below upwards. These methods might sometimes be usefully combined. The chief aim should be to reach as easily as possible the isthmus of the cervix and to attack the broad ligaments from below upwards.

Neurology.

Dr. J. F. **Sutherland**, Deputy Commissioner in Lunacy for Scotland, read a paper on the Geographical Distribution of Lunacy in Scotland and Ireland (*urbs et rus*). The significance of migration and mortality under five years of age was clearly brought out. The paper was well received and the maps and diagrams illustrating it excited favourable comment. The view was put forward that so many imbeciles under five years of age being swept off by neglect, injudicious dietary, and zymotic disease in urban and city areas accounted for the vastly different ratios of lunacy prevailing in rural and urban areas. The ratio was 30 per 10,000 in the urban districts and it was as high as 90 per 10,000 in rural districts. The reverse was the case with the mortality under five years of age which was thrice as great in urban as in rural areas. The shaded maps exhibited were framed on the census of Great Britain and Ireland taken in the year 1901.

Therapeutics.

Dr. R. **Blondel** (Paris) read a paper upon the Physiological and Therapeutical Properties of Milk Serum, of which the following is an abstract. The serum of cow's milk obtained in a state of purity by rapid coagulation at a temperature of 38° C. by means of an acid and then neutralised with soda and filtered through a porcelain filter showed certain very remarkable properties which appeared hitherto to have been unnoticed, for nothing had been used for the same purposes except skimmed milk sterilised at a temperature of 100° C., the result of which was that a liquid was obtained differing but little from a simple solution of milk sugar and the salts found in milk. Serum, however, prepared in the above manner contained in addition a definite proportion of albumin and of organic ferments such as pepsin, trypsin, lipase, and glycolytic ferment and oxydases. The true oxydases, however, which had the power of striking a blue colour with tincture of guaiacum were but scanty and the oxydases most marked were the indirect oxydases which did not colour guaiacum blue except in the presence of a watery solution of oxygen. If the serum thus obtained was placed in flasks sealed up in an atmosphere of carbonic acid the action of the ferments was stopped and the fluid remained unchanged. Injection into a healthy man hypodermically in doses of 20 cubic centimetres per diem was carried out for one month without any inconvenience. The weight, however, diminished somewhat and the urine underwent important modifications, that was to say, the excretion of the urea, of uric acid, and of phosphates was considerably augmented. When administered to a gouty patient the day after an acute attack of gout within 24 hours the patient had another attack with a profuse discharge of uric acid. The effect of the injections upon the blood-pressure was to lower it markedly. Dr. Blondel then gave details of various cases of infectious fevers in which the serum had been administered at the Pitié and Charité hospitals. In these cases the injections lowered the temperature. Dr. Blondel considered that the lowering of the temperature was due to two physiological actions, that of the oxidising ferments which destroyed the toxins and that of the albumin which was injected which brought about a marked leucocytosis. Dr. Blondel had never found any disagreeable results from the injection. It was not painful but sometimes three or four hours after the injection the limb into which the serum had been injected felt cold. Sometimes, too, a light cloud of albumin was found in the urine. The simultaneous administration of 5 or 10 centigrammes of sulphate of quinine had a marked effect in increasing the power of the injection to lower the temperature. This, Dr. Blondel thought, was remarkable, for quinine alone had no effect in cases of puerperal septicæmia. To sum up, milk serum employed in this manner lowered the blood pressure very markedly and also lowered the temperature. Dr. Blondel had obtained encouraging results in various infectious diseases and more especially in cases of puerperal septicæmia. Altogether he had tried the treatment in 30 cases, including surgical cases and cases of puerperal septicæmia.

Dr. [illegible] (Paris) read a paper on the Methods of app[illegible] lue. He co[illegible] of high-f[illegible] on, brush discharge, spark discharge, and the application by means of various electrodes attached to the upper spiral of a monopolar resonator. He also mentioned brush discharge and application of the current by electrodes attached to bipolar resonators. The bipolar brush discharges he considered inefficacious and illogical in cases of pulmonary tuberculosis, for they increased the activity of tissue change. He had found them useful, however, in cases of neuralgia, rheumatism, diabetes without azoturia, and neurasthenia with loss of arterial tone.

A paper on a New Method for the Pleasant Administration of Nauseous Drugs was communicated by Mr. **Otto Maresch** (Trelleborg, Sweden). Mr. Maresch pointed out that although most branches of medicine and surgery had made enormous advances within the last 50 years yet the art of pharmacy had not advanced *pari passu*. The method of giving nauseous drugs except when they were given in capsules, which children generally found difficulty in taking, was still very much as it was in the middle of the last century. He had made various experiments and had found that many ill-tasting drugs could easily be made into an emulsion with cocoa and sugar and that their taste thereby was completely hidden. He mentioned especially bitter drugs, such as quinine, and nauseous drugs such as castor oil. His emulsion was made by a process involving quick cooling.

Dr. **Decref** (Madrid) read a paper entitled "A Contribution to the Study of the Treatment of Ataxia by the Re-educative Method." He pointed out that there were three stages in the history of this method. The first corresponded to a work published in 1877 by Dr. Godard of Paris on Chervin's treatment of stammering. Dr. Moutard Martin defined this trouble as an intermittent spasmodic condition of the phonetic apparatus and Dr. Godard accepted this definition as it explained the Chervin treatment which consisted in (1) regulating the respiration and prolonging expiration so as to allow the pronunciation of a word without interruption ; (2) in educating the phonetic apparatus by a special course of gymnastics in order to overcome the muscular rigidity so as to allow the tongue, the jaws, and the lips to assume the necessary positions ; and (3) in strengthening these actions by attention and reflection. This was the basis of all the re-educative methods. The second step corresponded to a paper Dr. Decref published in 1887 in the *Medical Review* of Madrid. The third step consisted in Dr. Fränkel's communication to the Academy of Bremen when he presented three cases of locomotor ataxia in which the incoördination had disappeared as the result of a series of exercises. Since this date others had used these methods. Dr. Decref himself had employed re-educative exercises in 25 cases of chorea and with great success. He described one case where the patient was eight years old and suffered from a very severe chorea. The movements were very violent and the child was unable to speak a word. He was much wasted, the disease had lasted six weeks, and no treatment appeared to have made any improvement. The child was treated by the re-educative method *on 30 occasions and the chorea completely disappeared, but* the wasting was as marked as ever. Later, while at a watering-place in the north of Spain pieces of a tapeworm were expelled and by suitable treatment the whole worm was removed. The average time required for the complete treatment of cases of chorea had been a month. In slight cases a fortnight had sufficed. The following was the procedure adopted : (1) a tepid spinal douche lasting for half a minute ; later, when the spasms had diminished, this might be replaced by the cold douche or the hot douche at a temperature of from 43° to 45°C. (113°F.) if there were any rheumatic complications ; (2) immediately after the douche the patient was lightly massaged all over, effleurage being employed ; (3) the patient, dressed suitably, then performed the various exercises, such as (*a*) flexion, extension, and abduction, first of one foot and then of both feet together ; (*b*) flexion of the knees and hips, abduction and adduction of the legs, and so on ; and (*c*) similar movements of the arms. All these exercises had to be guided by the operator's hands, but he should not force the limbs in the direction in which they had to go. The exercises should be performed rhythmically and to the order of the operator who counted aloud at each movement. (*d*) When the patient improved all these exercises had to be performed in the standing position. These exercises were repeated every day and the facility of their performance was soon seen to increase.

DERMATOLOGY AND SYPHILOGRAPHY.

Dr. JAY (Clermont-Ferrand) read a paper on Excision of Syphilitic Chancres. He pointed out that excision of syphilitic chancres was a hopeful method of aborting syphilis. In most of the patients upon whom he had operated careful observation for a long period of time after the operation enabled him to state that neither secondary nor tertiary syphilitic symptoms had appeared. The ulceration had appeared at the normal date after contagion and the syphilitic nature of the lesion appeared evident, both from its clinical features and from information derived from an examination of both parties. The success, therefore, of the treatment was founded upon as firm a basis of argument as it was possible to put forward Dr. Jay concluded by affirming that it was possible to eradicate syphilis by removing the early focus of the disease and so far as regarded chancres easy of access, such as those on the prepuce, he said that his motto was, "Excise and watch."

PEDIATRICS

Dr. A. L. PEYROUX (Paris) read a paper on the work of two charitable undertakings, the "Consultations de Nourrissons" and the "Gouttes de Lait" The first of these was concerned almost exclusively with breast-fed infants and had given excellent results. The second, on the other hand, was concerned almost entirely with artificial feeding and its results had been unsatisfactory, not on account of the sterilised milk itself, but on account of difficulties connected with supervision The "Gouttes de Lait" by distributing sterilised milk to mothers without at the same time making inquiries as to their home circumstances and their possible ability to suckle their infants had, according to Dr. Peyroux, done what it could to discourage breast-feeding and was therefore undeserving of support.

Dr. ERNEST DEUTSCH (Budapest) also read a paper on the "Gouttes de Lait." He said that women who were insufficiently fed could not suckle their children properly and therefore the relief ought to commence with the distribution of milk and tickets for soup-kitchens. If the infant did not gain in weight artificial feeding ought to be combined with suckling. When the mother had no milk the alternative was to supply pasteurised milk in bottles, each bottle containing the quantity to be used at a time. A medical man ought to be attached to the "Gouttes de Lait" and instruction ought to be given to mothers by the holding of meetings and the distribution of pamphlets.

Dr. ALBERT JOSIAS and Dr. JEAN CH. ROUX (Paris) communicated a paper on the Treatment of Tuberculosis in Children by Meat Juice and Raw Meat. This system was followed in the case of 46 patients who took 150 grammes of meat juice and 100 grammes of raw meat every day. Of these patients 16 suffered from tuberculous peritonitis and meningitis, acute tuberculosis, and Pott's disease. The remaining 30 were the subjects of pulmonary phthisis and of these 13 either recovered or were greatly improved and 14 *died.*

Dr. F. J. POYNTON (London) read a paper on a Microbic Agent considered as the Connecting Link between Chorea, Endocarditis, and Articular Rheumatism in Childhood. He said that investigations chiefly on a statistical basis made by H. Roger in 1866 and by many subsequent writers had proved the close association of chorea and rheumatism. He and Dr. Alexander Paine had produced chorea experimentally in a rabbit by inoculating it with the diplococcus of rheumatic fever and they had found the diplococcus in the rabbit's pia mater and the endothelium of the cortical capillary vessels. They had also found micrococci in the mitral valve, the cerebral cortex, and the pia mater in a fatal case of human chorea.

Dr. PATRICIO BOROBIO DIAZ (Saragossa) described 15 cases in which Surgical Anæsthesia had been produced in children by intra-spinal injections of a centigramme (one-seventh of a grain) of cocaine. Two of the operations were for urethral fistula ; the others were performed on the lower extremity and included a Pirogoff's amputation for tuberculosis of the tarsus.

Dr JOSE VIEDEN PORTELLO (Valencia) read a paper on the Treatment of Purulent Ophthalmia in the Newly-born. He recommended the local application of solutions of protargol of the strength of from 2 to 5 per cent. twice a day. In the intervals, with the aid of his new elevating irrigator, the eyes were to be bathed two or three times in the 24 hours with warm boric acid lotion which might contain a small quantity of solution of formalin having a strength of 1 in 2000. A little vaseline containing 2 per cent. of iodoform precipitated by ether should also be applied every four hours or more frequently. By this means a cure might be effected in from eight to 15 days. Nitrate of silver and solutions of corrosive sublimate should on no account be employed while the inflammation was active.

Dr. LUIS FATAS Y MONTES (Madrid) read a paper on Child Mortality in Madrid He said that during the last five years the average annual birth-rate of Spain was 34 50 per 1000, while that of Madrid was 32 69 per 1000. During the same period the average annual death-rate of Spain was 28·79 per 1000, while that of Madrid was 31·43 per 1000, a proportion which compared unfavourably with the death-rate of all the other European capitals. The child mortality per annum was very high—457 16 per 1000; as everywhere else, the mortality was in inverse ratio to the age, being 49 40 per cent. under one year, 38·52 per cent. from one to five years, 8 72 per cent from five to 10 years, and 3 35 per cent. from 10 to 15 years. Of 10 children born about six reached the fifth year. One year's statistics showed that the death-rate of illegitimate children was lower than that of legitimate children, an anomaly which might be explained by the fact that many of the former were put out to nurse and for that purpose were sent away from the city as soon as they were born. There was no discoverable relation between infant mortality and density of population. Of the deaths 25 66 per cent. were due to respiratory diseases, 20 21 per cent. to nervous diseases, and 26·70 per cent. to infectious diseases, including *tuberculosis and syphilis. In Madrid the proportion* of still-births was higher among illegitimate children than among legitimate; in Barcelona 25 per cent of the illegitimate children were stillborn Dr Fatas y Montes made a variety of recommendations for the improvement of the existing state of things, including prohibition of marriages of persons suffering from transmissible diseases, medical inspection of [illegible] spitals for children,

[illegible] aper on the Serum Treatment of Diphtheria with special reference to the use of Roux s serum, which, he said contained 1000 antitoxin units in five cubic centimetres and had been found to remain active for a long time—even for 18 months or two years It ought not however to be kept longer than two years Serum should be injected as soon as possible in all cases known or presumed to be diphtheria, without waiting for the completion of a bacteriological examination It was better to make 100 unnecessary injections than one that was too late The quantity injected in ordinary circumstances varied from five cubic centimetres for infants aged only a few weeks or months to 20 cubic centimetres for children above ten years Before the employment of serum the case mortality in diphtheria was 50 per cent, but it had now been reduced to 12 or 15 per cent *Injected as a prophylactic Roux's serum conferred* an immunity lasting three or four weeks The injections caused exanthematous eruptions on the skin in more than 16 per cent of the cases

Dr FRANCISCO CRIADO Y AGUILAR (Madrid) read a paper on the Pathology and Treatment of Pseudo hypertrophic Paralysis He believed that the increase in the volume of the muscles was due to hyperæmia of the spinal cord The treatment consisted of rest in bed, milk diet and counter irritation to the spine, baths and massage were injurious

Dr LOPE CARRALERO (Madrid) read a paper on Coryza in Suckling Infants as an Early Sign of Hereditary Syphilis

OTOLOGY

Dr H J L STRUYSCHEN (Breda) read a paper on Acouometry, the object being the determination of the lower limit of loudness of sound perceptible in a case of deafness The principle involved was the measurement of the decreasing amplitude of a vibrating tuning fork and the observation of the moment when the sound was no longer audible The decrease of amplitude being measured in micro millimetres by Gradenigo's method it became possible to calculate the amplitude (and consequently the loudness of the sound produced) at a given instant.

Professor E SCHMIEGELOW (Copenhagen) read a paper on the Causes of Deaf Mutism Of these the most important was loss of hearing, either total or partial. Total loss of hearing either congenital or supervening before the age of eight years brought about deaf mutism in most cases but not in all With respect to partial loss of hearing Professor Schmiegelow considered that children who could not hear ordinary conversation at a greater distance than ten inches would become deaf mutes

Dr A CASTEX (Paris) also read a paper on the causes of Deaf Mutism, prefacing it by an eulogy of Ponce de Leon a celebrated instructor of deaf mutes in Spain in the sixteenth century Congenital deaf mutism was most often met with in mountainous countries and had a tendency to affect male children born of consanguineous parents Heredity showed itself as between grandparents and grandchildren rather than as between parents and children Syphilis tuberculosis, rickets alcoholism in the ancestry, illness of or accidents to the mother during pregnancy, and lesions of the labyrinth, brain, and medulla oblongata were important predisposing causes Some of the most energetic factors in the production of acquired deaf mutism were affections of the brain and meninges measles scarlet fever, and diphtheria

Dr MARCEL LERMOYEZ (Paris) read a paper on the After treatment of Operations on the Ear, with especial reference to mastoid trephining

LEGAL MEDICINE AND TOXICOLOGY

Dr FRANCISCO CARBONELL Y SOLES (Barcelona) read a paper on the use of Crystallography in the Identification of Poisonous Alkaloids Chloride of sodium normally crystallises in cubes, but when crystallised from solutions containing very small quantities of alkaloids it assumed a variety of forms by observing which he said that the alkaloids in question might be recognised

Dr DIO A VALDIVIESO Y PRIETO read a paper recommending that the Transmission of Venereal Disease should be made a statutory offence, without regard to the sex or social position of the culprit, and that the penalty should be two years imprisonment together with liability for all medical expenses incurred and for compensation to the injured party In the event of the culprit being unable to make these payments an additional term of imprisonment should be imposed Brothel keepers (*las dueñas*) should be liable to fine and imprisonment in the event of the women in their establishments (*las pupilas*) failing to make the requisite payments

OPHTHALMOLOGY

Dr JUAN SANTOS FERNANDEZ (Havana) read a paper on Eye Disease in Cuba The only unusual disease of the eye mentioned by him was cequera an endemic purulent ophthalmia which sometimes became epidemic and was carried from one person to another by a small fly It seemed to be produced by the bacillus of Weeks and the diplococcus of Mora With respect to the effect of tobacco on the eye he was decidedly of opinion that tobacco had been blamed for giving rise to morbid conditions which were really due to alcohol, but he admitted that many medical men in the island did not hold this view Myopia was rare, especially in negroes but the majority of the inhabitants of the island were hypermetropic and the use of spectacles was increasing

Dr FERNANDEZ also read a paper on the Lacrymal Canal in the Negro being a record of comparative observations made on 24 dissecting room subjects of whom 15 were whites and nine were negroes He found that in whites the nasal canal was long and somewhat tortuous, it was therefore liable to stricture and other disorders In the negro on *the other hand, the nasal canal was wide and straight in* consequence of which negroes were less liable than whites to stricture and other complications affecting the lacrymal sac and lacrymal canal

BIRMINGHAM

(FROM OUR OWN CORRESPONDENT)

Women's Hospital

THE annual meeting of the supporters of this institution has recently been held and the report read thereat shows that the number of new cases seen in the out-patient department was 3379 being an increase of 94 as compared with last year The total number of new and old cases treated during the year was 18 078 being 904 more than last year On the other hand, there were 14 less patients admitted to the in patient department the total number being 426 The total number of operations was 412, among these were 234 cases involving abdominal section Of these three patients died, giving a death rate of 1 28 per cent, as compared with 4 2 per cent on 213 operations in 1901 From the founding of the hospital to Dec 31st 1901, there have been 3376 operations and of these patients 215 died giving a death rate of 6 36 per cent. For the five years 1897 to 1901 inclusive there were 882 operations and 41 of these patients died giving a death rate of 4 64 per cent. Allusion was made to the subject of the new hospital for which funds are now being collected It is intended that there shall be 40 beds and that the building shall be easy of access both to the medical staff and to the convalescent home About £40 000 will be required for the purchase of the freehold site and for building and equipping the new hospital Towards this amount a sum of over £26 000 has been given or promised and great efforts are being made to secure the balance

Ear and Throat Hospital

The annual meeting of the friends and supporters of this hospital was also held recently During the year 1192 in patients were treated as compared with 1172 in the previous year The number of out patients was 8122, being 1120 more than in 1901 Here, also, there is an urgent cry for extension but the response to the appeal for funds has so far not been very encouraging only £1300 out of the necessary £8000 having been promised. This hospital has had some considerable losses during the year Mr F Marsh and Dr F W Foxcroft who has been appointed aural surgeon and laryngologist at the General Hospital have both resigned their connexion with the hospital Moreover, it has lost by death the services of Mr G Panton, F.R.S. Edin., for a number of years its honorary secretary. Mr. Panton, who was almost up to the time of his death secretary in Birmingham to the Scottish Provident Association, had rendered most valuable service to the hospital. His methods and ideals had by no means always been such as to commend themselves to the members of the medical profession, but, on the other hand, it must be admitted that he found the hospital a small and comparatively obscure charity and left it in a much more prominent position.

The General Hospital.

The growth in the efficiency of provincial hospitals and, it may also be added, in the expensiveness of their management, is well exemplified by a comparison between the resident staff of this institution 20 years ago and at the present day, it being remembered that the number of beds has been but little increased during that period. 20 years ago there were only three qualified residents attached to the institution—resident medical and surgical officers and pathologist. The last-named official was responsible for the administration of all the anæsthetics—a somewhat singular combination of duties—and he had also the laborious task of compiling the annual tables of statistics for the hospital reports. At the present day there are a resident surgical officer with four house surgeons under him, a resident medical officer with three house physicians, a pathologist—who no longer gives anæsthetics, for two special officers are appointed for that purpose—and now a fresh resident post has been created in the shape of a house surgeon in charge of the special departments of the hospital, obstetric, ophthalmic, and oral. This hospital has recently lost one of the oldest members of its committee in the person of Mr. A. A. Ellis of King's Norton. Mr. Ellis had never taken much part in the public work of the city but had served the General Hospital with untiring faithfulness for many years and will be much missed by all connected with it.

The Medical Officership of Health.

The council has now decided upon the terms of this appointment which I observe is advertised in your advertisement columns. At the meeting at which the report of the health committee on the subject was discussed some truly original remarks were forthcoming from the wise men of the city. According to the daily paper one councillor's speech appears to have consisted of the remark—"Give him a thousand a year—Lord 'a mercy!" Another suggested that the work of the medical officer of health in the city was mainly of a routine character, which shows a fine ignorance of the actual state of affairs, whilst another sapient worthy thought the salary so enormous that there was a risk of tempting some man whose reputation had been made and who would be content to come to Birmingham to rest upon his laurels. Reason, however, prevailed, and the recommendation that £1000 per annum should be offered was approved by an overwhelming majority. It is probable that the council will have no lack of candidates from amongst whom to make a choice. It is to be hoped that its selection may be a wise one. A strong man, possessed of commonsense and tact, is badly needed, and if possible he should be a man whose selection will commend itself to the general practitioners of the district, for should this be so the possibilities of friction will be much decreased.

The University.

The report of the visitor and inspector of the General Medical Council on the final examination of the University for medical and surgical degrees held last June has recently been made public and by an excellent new rule of the Council copies have been sent to all the examiners in the subjects of the final. The report is one with which the University has every reason to be well satisfied. It speaks of the examination as "a practical examination of a high standard, well planned and well carried out." The practical examination in pathology and the practical examination in forensic medicine are very highly spoken of. With respect to the latter the report states that, "Judging from the description of the practical examination which we have given from the information furnished to us and from the written work of the six candidates whose papers we have read, we should say that this examination, as far as our experience goes, is unique of its kind and that it deserves high commendation." A few suggestions for the future were made by the visitor and inspector and according to the report of the Examination Committee of the General Medical Council on the reply of the University, "the authorities of the University have wisely recognised the value of the friendly criticism of the inspector and visitor, and have, in the view of this committee, met them sensibly and well." It must be a source of great satisfaction to all friends of this young institution to find it come out so well from its first inspection. Since I last wrote two reading- and writing-rooms for the use of the medical students only have been opened in the University buildings. These rooms, which have been very comfortably furnished, will supply a want which has long been felt and will, it is hoped and believed, greatly add to the comfort of the medical students who have in the past had no separate accommodation of their own.

May 12th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Opening of the Johnston Laboratories at University College, Liverpool.

THE Right Hon. Walter Long, M.P., the President of the Local Government Board, formally opened on May 9th the new laboratories, the gift of Mr. William Johnston. A description of the laboratories appeared in THE LANCET of May 9th, p. 1338. The opening ceremony took place in the Arts theatre of University College in the presence of a distinguished company, including prominent citizens of Liverpool, many foreign guests, and the professors and lecturers of the College in academic costume. Mr. E. K. Muspratt, in the absence of the Earl of Derby, K.G., presided and amongst those on the platform, besides Mr. Walter Long, were the Lord Mayor, Mr. William Johnston (the donor of the laboratories), Sir Alfred L. Jones, K.C.M.G., Principal Dale, Sir Michael Foster, K.C.B., M.P., Professor G. Sims Woodhead, Professor F. Gotch, Professor T. Clifford Allbutt, Dr. Ravenal (Philadelphia), Professor Weigert (Frankfort), Professor Blanchard (Paris), Professor Perroncito (Italy), Professor Nocard (Paris), Professor Eulenburg (Berlin), Professor Uhlworm, Professor von Hausemann, and Dr. Sleegmann (Holland). Prior to the opening speech of Mr. Long, Principal Dale read a letter from Lord Derby, the President of the College, in which he expressed great regret at his unavoidable absence from the opening ceremony, as it would have given him great pleasure to welcome the many distinguished foreign visitors. Mr. Muspratt (the chairman) said that he had received a number of telegrams from various parts of Germany expressing good wishes for the success of the work of the new laboratories. That gathering had assembled to witness the opening of the laboratories in which a large amount of original research would be carried on and which they owed to the munificence of Mr. William Johnston who had for many years taken a deep interest in the progress of medical science and had seen the need of devoting a large amount of his means to the promotion of original research in medicine. It was with that view that Mr. Johnston approached Professor R. W. Boyce who saw the means by which Mr. Johnston could promote the object which he had nearest at heart. They had also to welcome Mr. Long, a representative of His Majesty's Government and the head of the Local Government Department. He hoped Mr. Long's presence there was an indication of the increased interest which the Government took in the progress of science. Nearly all the Government departments for the last 50 years had been obliged to seek the assistance of scientific men and though they had availed themselves of the services of these men they had thought little of the necessity of training up with the increase of civilisation a large number of men of high scientific attainments. The training of such men could not be conducted in classes of science and art alone but in a large institution such as University College, which he trusted in the near future would become a university. In the laboratories which Mr. Long was about to open that afternoon was a department of bio-chemistry. For a number of years Germany had had a large number of professors of that one science. Chemistry really lay at the root of many other sciences. It was more than 50 years since Baron Liebig first showed the world that chemistry could be of great assistance to physiology and afterwards to pathology. Bio-chemistry had developed into a special science. It was known for a long time in Germany as physiological chemistry but it was now extended and was called bio-chemistry. It had practically to do with the chemistry of life and of living matter The department in the new laboratories of experimental medicine was a new development of medical research and the first object of these experiments would be undertaken for the study of cancer He hoped Mr Long would carry away with him a feeling that if they were to have scientific men in the future to work in the Government departments it was necessary that they should do their best to promote original scientific research Mr William Johnston, who was very heartily received, said that it gave him great pleasure to tender for the acceptance of the council the laboratories which Mr Long had so kindly consented to open It had afforded him much gratification to be associated with the laboratories, because from his early days he had taken the deepest interest in medicine and in medical research *He trusted that the laboratories would prove successful,* as he was sure they would be, considering the eminent men in whose charge they were placed, and he further hoped that they would contribute to placing the medical school of *their new university in the foremost rank of scientific* schools He asked Mr Long to declare the laboratories open Mr Walter Long, who was very warmly received, said that there could not be any doubt that there were a great need and a very widespread demand for laboratories such as the one presented by Mr Johnston He did not believe that there was any need to impress upon his colleagues in the Government the importance of such work as would be performed in those laboratories It was appreciated by them as it was appreciated all the world over Members of governments were not altogether in easy positions He did not refer to their political party life or to their conflicts in the House of Commons but to the inner side of their life As President of the Local Government Board what could be pleasanter or easier for him than to meet the chairman in his suggestion more than half way and to assure him that the resources of the State should be exhausted in days to come in order to do their duty to science, and especially to medical science ? Members of the Government had to act not separately but conjointly and so long as he had the honour to occupy his present position he would do his best to secure on behalf of the Government of the day the utmost assistance which could be given to the advancement of science in all parts of the country How close, it seemed to him, was the connexion between the development of science—and especially that form of it known as preventive medicine—and commerce for which this great country was so justly famous, and in the city of Liverpool there was especial and striking evidence of this union The School of Tropical Medicine in Liverpool had already been productive of conferences of the greatest possible value, not only between members of the school and people engaged in commerce, but conferences which had drawn to them and included the presence of distinguished men from our colonies and from foreign countries That union was not only striking in itself but had been pro*ductive of great and valuable results Then he came to* a question which closely touched the department with which he was concerned It had always been the object of that department, while imposing regulations which had for their object the prevention of the spread of disease at the same time to do as little as possible to injure the trade of this country and the trade of the world The work that would be done in these laboratories would be of the greatest advantage and of the most inestimable benefit to the country as a whole. *He admired the munificence of the citizens of Liver*pool. The permanent record of their work was in the splendid buildings which existed for the purpose of research and the schools and scholarships which they had founded for this most beneficent work Not only had they contributed £200 000 to the university fund but they had a notable instance in the fact that the city was willing to be rated for the purpose of maintaining university training in this direction. One felt truly for those engaged in this great work Let them try to realise what were the sufferings of the men in the time of Wellington and to contrast those with the possibilities for the relief of pain in the war just concluded The work to be done in the new laboratories would tend towards the relief of pain and of human suffering and they owed much to Mr Johnston and to the munificence of other benefactors whose large-heartedness had enabled such a work to be successfully carried on All knew what terrible suffering resulted from cancer There had been startling discoveries made in connexion with the more common diseases, such as diphtheria and typhoid fever The investigation of cancer was one of the great works which the munificence of Mr Johnston would enable them to carry on in those laboratories In declaring the laboratories open Mr Long commended the donor's munificence in saying that "Much has been done', "There is still a wide field", "Yet much remains to conquer still"; and "Peace hath her victories no less renowned than war' That might rightly be the motto for large hearted citizens like Mr Johnston *Might his beneficence be followed by great* and triumphant victories in the field of human life Principal Dale moved —

> That this meeting of members and friends of University College expresses its sincere gratitude to Mr William Johnston for the munificence which has enriched the University of Liverpool for the work of medical research and to Mr Walter Long for his kindness in taking part in the inaugural ceremony

Principal Dale said that the laboratories were but a part of Mr Johnston's gift to the University He had founded and endowed the chair of bio chemistry to which Professor Moore had been appointed Mr Johnston had also founded and endowed three fellowships for the purpose of medical research The motion was seconded by Professor Gotch The Lord Mayor, as representing the citizens, and Sir Alfred Jones, as representing commerce, cordially supported the motion, which was carried with acclamation The assembly afterwards visited the new laboratories

Banquet at the Adelphi Hotel. Symposium at the Medical Society

In the evening Mr William Johnston entertained a distinguished company to dinner at the Adelphi Hotel Covers were laid for 140 gentlemen. Mr Johnston presided, having on his right Mr Walter Long, M P, and on his left the Lord Mayor of Liverpool Other distinguished guests included Sir Michael Foster, M P, Professor Blanchard, Professor Perroncito, Professor Armstrong, Professor Gotch, Professor Weigert, Professor Ravenal, Professor T. Clifford Allbutt, Professor Schafer, Professor Hansemann, Professor Bottagi Professor S Delépine, Professor Nocard, Professor Boyce, Professor R Ross, C B, Professor Zimmermann, Professor Eulenburg, Sir Alfred Jones, Sir John Brunner, Bart, M P, Sir William M Banks, and Dr A. S F Grunbaum The chairman submitted the toasts of the King and Queen, which were duly honoured The Lord Mayor proposed the toast of "The President of the Local Government Board' in an able speech Mr Walter Long, in reply, said he was rejoiced to see that on the present occasion they had the presence not only of many of their own leading scientists but some of the most distinguished *savants* in Europe Sir Alfred Jones submitted the toast of "Commerce and Scientific Research," which was replied to by Sir Michael Foster in a witty speech He said that in modern science Liverpool took a leading place He referred to the close and cordial relationship which existed between science and commerce and expressed confidence *that in this* relation, so far as science was concerned, she would never seek to divorce herself from commerce Professor Armstrong also responded to the toast. The toast of "Our Foreign Guests" proposed by Sir John Brunner, Bart, was responded to by Professor Ravenal, Professor Blanchard, Professor Weigert and Professor Perroncito —Mr Rushton Parker, the President of the Liverpool Medical Institution, received 140 members and foreign guests at a symposium at the institution in honour of the opening of the laboratories on Monday night

The New Liverpool University

The feeling was expressed at the meeting of the court of governors of University College held on May 2nd that there was some ground for hope that the charter constituting the new university might possibly be issued at the beginning of July If that took place the next step would be to pass through Parliament an Act transferring the property of University College to the University of Liverpool A Bill for that purpose was read a second time in the House of Lords a week ago, but it could not further proceed until the charter was granted Assuming that all goes well the court of governors anticipated that the University of Liverpool would be able *to inaugurate* its career on Oct 1st next.

May 12th

THE CANCER RESEARCH FUND —The sum of £1000 has been received from Mr Henry Louis Florence by the honorary treasurer of the Cancer Research Fund under the direction of the Royal Colleges of Physicians of London and Surgeons of England

WALES AND WESTERN COUNTIES NOTES.

(From our own Correspondents.)

Proposed Incorporation of Merthyr Tydvil.

It is remarkable that among the 22 urban districts of Glamorganshire, where there is an aggregate population of three-quarters of a million, there are only two county boroughs (Cardiff and Swansea) and only three municipal boroughs (Aberavon, Cowbridge, and Neath), these three towns having a combined population of only 25,000 persons. It is the more remarkable because there are two districts (Rhondda and Merthyr) each with a population sufficiently large to qualify them as county boroughs and there are three towns (Aberdare, Mountain Ash, and Pontypridd) the population in each of which is either over 40,000 or approaching that number. As a first step towards altering this condition a prolonged inquiry extending over nine days has just been held at Merthyr by the Hon. Everard Fielding, a commissioner appointed by the Privy Council to hear evidence for and against a petition which had been presented by the district council praying that a charter of incorporation should be granted to the town and parish of Merthyr. Among the inhabitants there appears to be a very general desire to obtain the charter, the opposition coming almost entirely from the large employers of labour such as Messrs. Guest, Keen, and Nettlefolds who own the great Dowlais works, from the railway companies, and from the Glamorgan County Council, this last-named authority very naturally being loth to lose a large portion of its rateable value. The population of Merthyr is about 70,000, the rateable value is £260,000, and it has an area of some 12,000 acres, so that the arguments in favour of incorporation are strong. It is of interest to record the opinion expressed by Mr. C. Neve Cresswell who held a similar inquiry in 1897 on behalf of the Privy Council. He said that he did not desire to hear any arguments as to the advantages of incorporation, for his mind had been made up for many years as to the obvious advantages of a municipal as compared with other forms of administration. With regard to the town of Merthyr itself he said that he had been about the town and had seen quite sufficient to satisfy himself that the present system of government was not sufficient for the proper government of the place. That a vigorous local government is needed in Merthyr at the present time is evident from a statement made to the commissioner in the last inquiry by Mr. D. J. Thomas, the medical officer of health, with regard to the housing of the workpeople in the town. He said that in the past two years 497 houses, or 3·5 per cent. of all the houses in the parish, had been represented as unfit for habitation and that 255 of these had been closed and 150 demolished.

Tobacco Poisoning.

Instances of fatal poisoning by tobacco are sufficiently rare to warrant the recording of a case at Tredegar in Monmouthshire. A boy, 15 years of age, who had been for some time in the habit of chewing tobacco and who even took it to bed with him, became ill on the evening of May 5th, when he was found by Mr. Isaac Crawford, the colliery surgeon, unconscious and almost pulseless. In spite of injections of strychnine and stimulants the patient died on the following day. At the inquest which was subsequently held Mr. Crawford stated that tobacco chewing and smoking were largely practised by the boys of the district and that 14 years ago a boy of about the same age met with his death in Tredegar from tobacco poisoning.

The Treatment of Tramps.

The large increase in the number of vagrants is now matter for discussion all over the country and at a conference of the Poor-law guardians of South Wales and Monmouthshire held at Carmarthen on May 7th the subject was very exhaustively dealt with. Mr. A. F. Vulliamy, clerk to the guardians of the Ipswich Union, maintained that vagrant wards should not be provided by the local Poor-law authority but by the nation and that they should only be situated at a reasonable day's march from one another, the professional tramp being provided with a pass ticket denoting the only places at which he would be allowed to stay the night and any deviation from the route given should render him liable to imprisonment or to be sent to a labour colony. Among the members of the conference there was a pretty general consensus of opinion that the children of habitual tramps should be taken away from them, while a Cardiff guardian pointed out that the Employers' Liability Act and the Compensation Act made it much more difficult for a man 45 years of age with a few grey hairs to obtain employment.

Porthcawl Rest.

The Porthcawl Rest, which has now been established as a convalescent home for more than 20 years, is one of the best-managed institutions in South Wales and is doing a vast amount of good. At the annual meeting of the subscribers held on May 8th it was stated that the daily cost of maintenance per head had been reduced to 1*s.* from 1*s.* 6*d.* in the previous year, when the expenditure had exceeded the income by a considerable sum.

Pembrokeshire County Council.

At the annual meeting of the Pembrokeshire County Council held on May 5th Mr. George Griffith, M.R.C.P. Edin., M.R.C.S. Eng., J.P., was elected chairman.

May 11th.

SCOTLAND.

(From our own Correspondents.)

The King's Visit to Edinburgh.

Edinburgh—and, for the matter of that, all Scotland—is fervent with loyalty and pride at the visit of the King. To your readers, perhaps, the most interesting ceremony of the visit was that of May 13th, when His Majesty opened the newly built Colinton Mains Hospital. The hospital, which is situated about four miles from Edinburgh, is intended for the reception of cases of infectious disease and stands on a site of some 130 acres. The architect is Mr. Morham of Edinburgh. Accommodation is provided for 600 patients and 150 nurses and the total cost of the buildings was £350,000. The King was received by Lord Rosebery, the Lord Provosts of Edinburgh, Glasgow, and Dundee, and Mr. Lang Todd, Convener of the Edinburgh Public Health Committee. When their Majesties arrived Mr. Lang Todd gave a short history of the institution of the buildings, and concluded by asking the King to declare the hospital open. His Majesty, in reply, congratulated the corporation of Edinburgh and mentioned the pleasure that he and the Queen felt in their visit and that the visit had taken place at a time to enable them to open the hospital. The King having formally opened the hospital the Queen planted an English elm and His Majesty followed suit by planting a Scottish elm. Their Majesties then returned to Dalkeith.

The Prevention of Consumption.

The second general meeting of the Glasgow and District Branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis was held on May 6th, when Lord Inverclyde, in the unavoidable absence of the Lord Provost, presided. The council in the report submitted to the meeting showed that considerable progress had been made towards the attainment of the objects of the association—the prevention of consumption by means of the education of the public regarding its prevalence, nature, and diffusion and the provision of suitable treatment for those who suffer from it. Among the various methods adopted—and it is believed with a considerable measure of success—have been the distribution among the working classes of over 60,000 pamphlets prepared and issued by the association, the holding of public meetings in various districts of the city, and negotiating with public companies and bodies to act upon, or to obtain if necessary, compulsory powers for the suppression of indiscriminate expectoration in public places or conveyances. Action taken in this connexion led to the enforcing of the by-law regulating the conduct of the Glasgow corporation cars, with the result that several offenders were prosecuted. A great part of the work of the branch has been in connexion with the proposed sanatorium. It is now formally announced that the small estate of Bellefield, near Lanark, consisting of about 27 acres has been acquired for the purpose. The council meantime is considering plans for the erection of pavilions and the reconstruction of the Mansion House, which when completed will provide accommodation for the treatment of 60 patients. It is intended in the meantime that the sanatorium should be set apart for male patients, because there is already in existence, in connexion with Quarrier's Homes, a sanatorium for female patients. This arrangement will thus prevent at present any overlapping of good work. A fund for the erection of this sanatorium has been instituted and the promised contributions to date amount to over £3600. Lady Maxwell of Calderwood has also given for the purposes of the branch certain ground extending to about four acres, as also three cottages, all situated in the village of Maxwelltown, near East Kilbride, the income from which meanwhile is being applied to the general purposes of the branch. The total membership now amounts to 622, showing an increase of 166 for the past year.

Advanced Cases of Pulmonary Tuberculosis.

It is generally felt that the advanced cases of pulmonary tuberculosis among the working class as distinguished from the pauper class ought to have some provision made for them. This is required whether the matter is regarded from the point of view of the individual patient or from the point of view of public health. At the present time the managers of the general hospitals do not consider it to be their duty to admit such cases into their general wards—a position which is quite tenable whether we consider the welfare of the patients generally treated in these wards or the welfare of those suffering from advanced pulmonary tuberculosis where treatment is desired. Further the managers of these general hospitals cannot see their way, on account of the great demand made on their space, to set apart wards for the special treatment of these cases nor will the public health authorities undertake the duty of taking care of even those very advanced cases which are presumably acting as centres of infection. Reference is here made to others than the pauper class which should, and actually do, come under the care of the parish council. Much credit is due to Dr. J. W. Allan, late superintendent of the Belvidere Fever Hospital and now physician to the Royal Infirmary, for keeping this aspect of the question constantly before the public. It is to be hoped that his efforts will carry with them the success which they deserve and that his suggestion made in a letter to the editor of the *Glasgow Herald* of May 6th for the erection and equipment of a hospital for the treatment of such cases will get the necessary support. The state of affairs referred to is one recognised by every practitioner in the city and if rectified would diminish to a very marked extent not only the misery caused by the disease but its widespread dissemination.

Lunacy and Alcoholic Excess in Glasgow.

The Glasgow Lunacy District Board has authorised a committee to consider the annual reports of the medical superintendents of the Glasgow district asylums at Woodilee and Gartloch with reference to the number of patients admitted to both asylums during the year ended May 15th, 1902, as the direct result of alcoholic excess. Particulars of each case, including also the cases treated in the observation wards of Barnhill poorhouse from the same cause, have been obtained and a statistical summary of the whole has been compiled. From this it appears that during the 12 months 565 persons were admitted to the two asylums as insane and 213 were admitted to the observation wards of the poorhouse as cases of incipient insanity. Of this number no fewer than 259, or 33 per cent., were found to have become chargeable to the parish through alcoholic indulgence. The alcoholic subjects admitted to the poorhouse numbered 103, of whom 12 died, eight were admitted to the asylums, and 74 recovered.

May 12th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Congenital Partial Intestinal Occlusion.

M. BŒCKEL at the meeting of the Academy of Medicine held on April 14th read an account of the case of a child, aged 18 months, who within six weeks after birth showed evident signs of intestinal obstruction with considerable meteorism. The introduction of tubes into both the rectum and the stomach as well as puncture of the intestine having given no results laparotomy was performed. There was found to be an enormous volvulus of the sigmoid flexure. This portion of the gut was resected and the two extremities were joined together. The abdomen was then closed and the patient rapidly recovered. M. Bœckel considered that the case was one of intestinal occlusion commencing during intra-uterine life and due to twisting of the sigmoid flexure, the condition being aided by an abnormal development of the mesocolon.

Researches into the Nature of Nephro-toxins.

M. Bierry laid before the Academy of Sciences on April 6th a paper upon Nephro-toxins. He referred to his previous work on the subject in which he had found that substances which were nephro-toxic for the dog could be produced in the blood of rabbits which had received an intraperitoneal injection of the pounded kidney of the dog. He had also found that properties which were nephro-toxic for the dog could be produced in the blood of rabbits into which had been injected simple nucleo-albumins derived from the kidneys of dogs. If a dog from 12 to 15 kilogrammes in weight received an injection of between 20 and 25 cubic centimetres of the blood of a rabbit which had been thus injected the dog showed on the third day albuminuria which increased up to the tenth or fifteenth day. On comparing the effects of the blood as a whole, of the fibrin, of the serum, and of the corpuscles he was enabled to state that the last two were the most poisonous. It would therefore appear that a nephro-toxin is a leucocyte poison. The urine of dogs which has been made albuminuric by this method contains in addition to serin and globulin certain albumoses, but never contains glucosazone.

The Relations between Acromegaly and Giantism as exemplified by the Post-mortem Examination of the Giant Constantine.

At the meeting of the Hospitals Medical Society held on May 8th M. Dufrane, M. Launois, and M. Pierre Roy showed the society certain portions of the skeleton of the giant Constantine who died in the Mons Hospital from septicæmia following a double amputation of the legs for symmetrical gangrene. The cranium showed the deformities characteristic of acromegaly. Prognathism of the lower jaw was very marked, while the sella turcica was much dilated and the pituitary body was larger than a walnut. The inferior extremities were disproportionately long as regards the trunk. The lower epiphysis of the femur and the upper epiphysis of the humerus had not united, though Constantine was 29 years of age when he died. These two abnormalities, taken in conjunction with the atrophy of the genital organs which existed, are typical of the "infantile giantism" described by M. Launois and M. Pierre Roy. But whereas in the case of Constantine the long bones continued to grow in length (*hyperostéogénèse enchondrale*) the bones of the [illegible] of infantile type and acromegaly (the two coexisted in Constantine's case) resolves the problem of the relations between acromegaly and giantism. It can now be affirmed that if all giants are not acromegalic *in esse*, yet at least all of them are so *in posse*.

The International Congress of Tuberculosis.

Last week a meeting was held in Paris of the committee of the International Congress of Tuberculosis. The delegates for the chief countries were—for Germany, M. von Leyden; for England, Dr. Hillier; for Austria, M. von Schraeder; for Belgium, M. Dewes; for Denmark, M. Roerdan; for Spain, M. Espina y Capo; for Norway, M. Holmoe; for Portugal, M. de Lancastre; for Russia, M. Blumenthal; for Switzerland, M. Schmitt; and for France, Dr. Brouardel. The various delegates described the steps as to tuberculosis which had been undertaken in their respective countries. Visits were paid to the Ormesson Hospital, where veritable miracles in the way of recoveries take place under the care of Dr. Petit and Sister Candide, and to the Calmette Dispensary at Lille. Without going into all the questions raised it may be said that the foreign delegates with M. von Leyden at their head were unanimous in praising the results which have already been attained in France. The effects of the ideas put forward by M. Albert Robin at his well-known conference some two months ago are already visible and the theory of the "barrack sanatorium," against which the famous French *savant* argued so energetically, has given place to more rational, more economical, and more efficacious measures.

May 13th.

UNIVERSITY OF LONDON: FACULTY OF MEDICINE.—A meeting of the Faculty of Medicine of the University of London will be held at South Kensington at 5 P.M. on Friday, May 22nd. The Faculty will consider a report recently rendered to the Senate by the Board of Studies in Dentistry with regard to the establishment of special degrees in dental surgery, together with proposed regulations for the curriculum of study and for examinations in this subject. A minority report has been submitted to the Senate and will also come under the consideration of the Faculty.

Medical News.

University of Cambridge.—At the third examination for medical and surgical degrees, Easter term, the following candidates were successful :—

Part II. Medicine, Surgery, and Midwifery.—H. Ackroyd, B.A., and L. E H R. Barker, B.A., Caius; J. R. Bentley, Emmanuel; G. T. Birks, B A., King's; A. R. Brailey, M.A., Downing; W. H. Brailey, M.A., Queens'; H. N. Burroughes B.A., Trinity; W. B. Crowfoot, B.A., Emmanuel; H. A. Cutler, M.A., Clare; W. F. L. Day, B.A., Caius; R. S Drew, B.A., Pembroke; E. A. Ellis, B.A., Downing; J. E. Frere, B.A., Pembroke; J. D. H. Freshwater, M.A., Trinity; E. V. Gostling, B.A., Caius; F. W. Goyder, B.A., St. John's; G. W. Greene, B.A., Downing; T. Guthrie, B.A., King's; W. L. Harnett, B.A., St. John's; W. Hill, B.A., Emmanuel; B. Hudson, B.A., Clare; H. L. P. Hulbert, M.A., and F. S. Kidd, B.A., Trinity; P. W. Leathart, B.A., Clare; H B. McCaskie, B.A., Caius; F. B. Manser, B.A., Peterhouse; G. W. Micklethwait, M.A., Trinity; P. K. Muspratt, B.A., Christ's; G. B. Norman, B.A., St. John's; P. N. Panton, B.A., Trinity; H. I. Pinches, B A., Sidney Sussex; F. Richmond, B.A., Clare; G. R. Rickett, B.A., King's; H. Robinson, B.A., Trinity; W. T. Scott, B.A., Clare; R. D. Smedley, M.A., Pembroke; J. E. Spicer, B A., Trinity; J. M. Stenhouse, B.A., Sidney Sussex; W. J. Susmann, B.A., Caius; B. N. Tebbs, M.A., Queens'; H. T. Thompson, M.A., Christ's; E. Weatherhead, St. John's; F. Whitaker, B.A., and L. E. Wigram, B.A., Trinity; H. L. Wilson, B.A., H. Selwyn; H. C. S. Woodward, M.A., Downing; and G. A. Wright, Christ's.

Royal College of Physicians and Royal College of Surgeons in Ireland.—The under-mentioned have passed the examination for the Conjoint Diploma in Public Health :—

A. Honours.—G. F. A. Smythe, F.R C.S. Edin., Lieutenant-Colonel R.A.M C., and J. Dorgon, M.B., B.Ch., Captain R.A.M.C.

B. Pass.—Geo. Hamill, F.R.C.S. Irel.; M. C. Beatty, L.R.C.P. and S., Lieutenant R.A.M.C.; R. A. Campbell, L.R.C.P. and S.; F. G. O'Donohue, L R.C.P. and S; John O'Hare, M.B., B.Ch.; W. C. Rivers, M.R.C.S.; and R. Huntly Nicholson, M.R.C.S., Colonel R.A.M.C.

Deaths of Eminent Foreign Medical Men.—The deaths of the following eminent foreign medical men are announced :—Dr. Eusebio Oehl, professor of physiology in the University of Pavia.—Dr. Nepveu, professor of pathological anatomy in the Marseilles Medical School.—Dr. La Bonnadière, professor of hygiene and therapeutics in the French Medical School, Beyrout.—Dr. G. Gevaert, *agrégé* in the Medical Faculty of the Brussels University.—Dr. Anton Bumm, professor of psychiatry in the University of Munich, at the age of 54 years. He had previously been professor in Erlangen. His best known papers are on the Physiology of the Brain and Nervous System.—Dr. Gustav von Veit, at Gevelsdorf in Pomerania, where he has been living since his retirement from the chair of Gynæcology in the University of Bonn some ten years ago. He may be considered as one of the founders of modern gynæcology, his name being more particularly connected with the introduction of the bimanual method of examination of the uterus and its appendages. He was in his eightieth year.

Royal College of Surgeons in Ireland—At a meeting of the President, Vice-President, and Council held on May 5th the following examiners were elected :—In anatomy: Ambrose Birmingham and Alexander Fraser. In surgery: F. Conway Dwyer, A. Fullerton, T. E. Gordon, and R. Lane Joynt. In physiology and histology: E. L'E. Ledwich and Charles Coppinger. In ophthalmology: Arthur H. Benson and Patrick W. Maxwell. In pathology and bacteriology: Arthur Hamilton White. In pathology: R. Allen. In midwifery and gynæcology: Frederick W. Kidd. In biology: John J. Burgess. In sanitary law and vital statistics: C. J. Powell. In engineering and architecture: J. Charles Wilmot. In dental surgery and pathology: Daniel Corbett, jun., and W. G. Story. In mechanical dentistry: George M. P. Murray and William Booth Pearsall. In chemistry and physics: Edward Lapper and R J. Montgomery. In languages: L. J. Woodroffe. In mathematics, physics, dictation, and English essay: J. W. Tristram—A meeting of the Fellows will be held on Saturday, May 30th, at 1 P.M., to receive the annual report of the council A meeting will also be held on Monday, June 1st, at 1 P.M., pursuant to the provisions of the charters, to elect a president, vice-president, council, and secretary of the College for the ensuing year. Fellows who may desire to have their names printed on the list of candidates for office are requested to signify their wish by letter to the registrar at the College on or before Tuesday, May 19th, as it is necessary to include the names in the voting papers which are forwarded to the Fellows and no candidate is eligible unless his application is received within the date specified.

Literary Intelligence.—The Scientific Press will shortly issue a small handbook entitled "A Practical Guide to Surgical Bandaging and Dressing," by W. Johnson Smith, F.R C.S. Eng.

Childhood Society.—A meeting of this society, which has for its object the scientific study of the mental and physical conditions of children, was held on May 11th at 7, St. James's-square, London, S.W., Earl Egerton of Tatton, the President, being in the chair.—Professor J. Edgar, M.A., Professor of Education in the University of St. Andrews, delivered an address on the Universities and Scientific Study of Children, with special reference to the Teaching Profession. The following motion, proposed by Mr. E. W. Brabrook, C.B., and seconded by Sir James Crichton Browne, F.R.S., was carried unanimously :—

> That it is desirable that the Elementary Education of Defective and Epileptic Children's Act, 1899, should be compulsory on educational authorities and that special training should be given at one or more training colleges for teachers who wish to qualify for the care of defective children. That the Government be requested to institute an inquiry into the best means of dealing with defective classes in after life and for determining the authority to be entrusted with that duty.

Parliamentary Intelligence.

HOUSE OF COMMONS.

Thursday, May 7th.

Small-pox in Liverpool.

Mr. Weir asked the President of the Local Government Board whether he was aware that when application was made to the clerk to the sanitary authority of Liverpool for permission to search the list of small-pox patients which he was required to keep under the Vaccination Act, 1898, the applicants were sent to the various small-pox hospitals for the purpose of inspecting the registers there; and whether arrangements could be made for the register to be kept in the clerk's office.—Mr. Grant Lawson, who replied, said: I understand that the hospital committee of the town council has imposed the obligation of making the entries in the small-pox register on the physician of the hospital and that the register is available at the office of the hospital for any person who desires to inspect it. I am informed by the town clerk that arrangements could be made for having it at some other office but that if this was done it would not be possible to keep the register so well up to date or so accurately as at present.

Mr. Weir also asked the President of the Local Government Board whether he was aware that the present epidemic of small-pox in Liverpool had already lasted for a period of six months, during which time there had been about 1400 cases and 90 deaths; and whether, seeing [illegible] would consider the advisability of [illegible] inspectors to inquire and to report [illegible] being adopted by the Liverpool [illegible] disease.—Mr. Grant Lawson, who replied, said: I am aware of the small-pox epidemic at Liverpool. At an early period of the outbreak one of the medical inspectors was directed to visit the district and to confer with the local authorities as to the measures to be taken and I have no reason to suppose that they are not doing their utmost in this matter. I may mention that the latest returns do not show that the epidemic is increasing.

Human Lymph.

Mr. Weir asked the President of the Local Government Board if he would state when public vaccinators discontinued the use of human lymph and for what reason its use was abandoned.—Mr. Long replied: The use of human lymph by public vaccinators was discontinued at the beginning of 1899 when the Vaccination Act of 1898 came into operation. The change was made in view of the recommendation of the Royal Commission on Vaccination.

"False Description in the Spirit Trade."

Mr. T. M. Healy a[illegible] Exchequer if he would state the total quanti[illegible] land during the year 1902 and how much [illegible] rectifying, and compounding purposes; [illegible] was used as whisky in Excise or Customs' warehouses in Leith; and, if so, what was the total quantity despatched thereto from distilleries in England; what were the materials from which English spirit was usually distilled; and if any beet molasses from abroad was used i[illegible]—Mr. Ritchie replied: The total quantity of spi[illegible] during the year ended March 31st, 1903, was [illegible] The quantity of home made spirits used for [illegible] period was 3,574,733 proof gallons. I have no means of knowing the quantities used for rectifying and compounding. English spirit is used in the warehouses at Leith but I have no means of knowing the quantities. The materials from which English spirit is usually distilled are malt, unmalted grain, molasses, sugar, glucose, and rice. No doubt beet molasses is used to some extent but I have no means of knowing the quantities.

Mr. T. M. Healy asked the Chancellor of the Exchequer whether any official information had reached him that in preparing whisky for the market frauds were practised in bond by the users of patent still spirit under the supervision of the Government officials; whether he would consider the advisability of bringing the sale of spirituous liquors under [illegible] Sale of Food and Dr[illegible] Acts in the same manner as [illegible] as both these spirits vary considerably in their chemical characteristics only an approximate estimation at best could be made in the case of a blend of which the origin and constituent ingredients were unknown.

Mr. HEALY Has the right hon gentleman seen a statement on the subject in THE LANCET?—Mr RITCHIE : No, I have not

Granard Union Hospital.

Mr. TULLY asked the Chief Secretary to the Lord Lieutenant of Ireland whether the Local Government Board could state the decision arrived at as the result of the sworn inquiry in Granard Union into the action of the medical officer and his management of the union hospital.—Mr. WYNDHAM replied : The decision has not yet been come to. It will be communicated in the ordinary course to the guardians

Nursing Arrangements in Irish Rural Districts

[illegible] at Strokestown was caused by the reports of the Board's medical inspector. The result of the inquiry established the recommendations of the inspector. The inquiry at Boyle is proposed for similar reasons

The Midwives Board.

Sir WALTER FOSTER asked the Secretary to the Board of Education [illegible] board.

Malarial Fever in Uganda.

Mr. HERBERT SAMUEL asked the Under Secretary of State for Foreign Affairs whether he was aware that huts had recently been built at Entebbe for a number of natives belonging to the Uganda Marine and their families in close proximity to the houses of [illegible] spread of [illegible] se huts to [illegible] the situa [illegible] e careful [illegible] fficer who [illegible] ave a free [illegible] received upon the quality of the water have not been unfavourable The local authorities have a free hand within reasonable limits and are alive to the importance of the question

Physical Training in Scotland

[illegible] of the Scottish Education Department and steps are now being taken, along with the Board of Education, to nominate a joint committee for the purpose indicated. It is hoped that the committee will begin work shortly.

[illegible] sentatives of those interested in order to obtain their views as to the recommendation referred to and the means by which it can be carried out. When their lordships are in possession of these views they will consider what, if any, proposals may be submitted to the Treasury as to the financial arrangements

FRIDAY, MAY 8TH.

Vivisection

Sir FREDERICK BANBURY asked the Secretary of State for the Home Department if he would state under what certificate the operation on a brown dog was performed at University College Hospital on Feb. 2nd last, and whether, seeing that a second operation was performed upon this animal before the wounds caused by the first operation had healed, he proposed to take any action in [illegible] replied The operation to which I [illegible] was performed under Certificate C [illegible] was an unhealed wound in the bod[illegible] made very shortly before by another licensee for the purpose of examining the condition of an organ upon which he had previously carried out an operation, from which the animal suffered no ill effects. Previously to the making of the incision the animal was placed under anæsthetics and while still in that condition was brought into the theatre for the purpose of the experiment under Certificate C During the whole of the latter the animal continued under anæsthetics and was eventually taken away and killed before it recovered consciousness In these circumstances there appears [illegible] to take [illegible] for the Home Department if [illegible] olding certificates to practise [illegible] ge, the qualifications of the operators, the nature of the certificates which they respectively held, and the source from which they obtained the dogs on which they experimented —Mr. AKERS DOUGLAS replied The information asked for, with the exception of the last item, is contained in the Annual Return of Experiments on Living Animals, of which the volume for the year 1902 will be issued very shortly. I have no information as to the source from which the animals are obtained.

Glycerinated Calf Lymph

[illegible]

Guards' Hospital, Westminster.

Captain JESSEL asked the Secretary of State for War if he would [illegible] BRODRICK replied The mild varieties only of infectious diseases which do not require notification under the Infectious Diseases Act are treated at Rochester-row Hospital, such as measles and mumps. There is considered to be no danger of infection being spread to the boys of the school mentioned.

MONDAY, MAY 11TH.

Another Lymph Question.

Mr. WEIR asked the President of the Local Government Board if he would state the number of private establishments in Great Britain for the production of a[illegible] unable to state the num[illegible] The hon Member will, [illegible] in an article in THE LANCET of June [illegible]

Mr WEIR also asked the Home Secretary whether his attention had been called to an experiment made on a dog on Feb. 2nd last at the London University College and whether he would take steps to secure that such experiments shall be discontinued or conducted only in the presence of a Home Office inspector and while [illegible] the [illegible] I [illegible]

TUESDAY, MAY 12TH.

Royal Commission on Arsenical Poisoning

Sir CUTHBERT QUILTER asked the President of the Local Government [illegible] in January, 1901, was likely [illegible] rstand that the commission [illegible] s about to prepare its final [illegible] state when it is likely to be issued

WEDNESDAY, MAY 13TH.

Another Vivisection Inquiry.

[illegible] e Secretary whether the dog [illegible] ty College on Feb 2nd was [illegible] the theatre —Mr. AKERS-[illegible]

Appointments.

Succ[illegible] Public Institutions, [illegible] this column, are [illegible] ected to the Sub- [illegible] morning of each [illegible]

CASE, HENRY, L R C P, L R C S Edin., has been appointed Medical Officer and Public Vaccinator to the Withnell district of the Chorley Union

CLARKE, A. H., M R C S, L.R C P. Lond., has been appointed Honorary Pathologist to the General Hospital, Hobart, Tasmania.

COGSWELL, P D, M R C S, L.R C P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Broughton Astley district of the county of Leicester.

COSGRAVE, F. E, M D. Dub, has been appointed Certifying Surgeon under the Factory Act for the Burton in Kendal district of the county of Westmoreland

FISCHER, G. A., M.B., B.S. Adel., has been appointed Physician in Charge of the Nose and Throat Department of the Adelaide Hospital, South Australia.

GRIFFITHS, J., M.R.C.S., has been appointed Certifying Surgeon under the Factory Act for the Llandrindod Wells district of the county of Radnor.

HORNE, MAYNARD, M.B., B C. Cantab., has been appointed Honorary Physician to the Margaret-street Hospital for Consumption.

HUBBARD, W. L., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Edenbridge district of the county of Kent.

JEAFFRESON, G. C., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Framlingham district of the county of Suffolk.

MARTIN, JOHN MIDDLETON, B.A., M.B., B.C. Cantab., D.P.H , L.S.A. Lond., has been re-appointed Medical Officer of Health for the Stroud Urban District.

RAMSBOTTOM, C. H. G., M.D. Vict., has been appointed Certifying Surgeon under the Factory Act for the Bungay district of the county of Suffolk and the Ditchingham district of the county of Norfolk.

RICHARDS, J. B. O., L R.C.P. Edin , L.P.C.S. Edin., L.F.P.S. Glasg., has been appointed Certifying Surgeon under the Factory Act for the Wadebridge district of the county of Cornwall.

RITCHIE, J., L.R.C.P., L.R.C.S. Edin., has been appointed Certifying Surgeon under the Factory Act for the Old Deer district of the county of Aberdeen.

SCARLETT-SYNGE, Mrs., M.D. Brux., L.S.A., L.M., has been appointed by His Excellency the Lieutenant-Governor of the Orange River Colony to be Medical Officer to the Government Normal College, Bloemfontein, and to the High School, Bloemfontein.

WACHER, S., F.R.C.S. Eng., has been appointed Certifying Surgeon under the Factory Act for the Canterbury district of the county of Kent.

WELCH, CHARLES HERBERT. L.R.C.P. Lond.. M R.C.S., has been appointed Visiting Medical Officer to the Royal United Hospital, Bath.

WHITAKER, L. E., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Diss district of the county of Norfolk.

WILLIS, C. S., M.B., M.Ch. Syd, has been appointed Officer of Health, Lennonville, West Australia.

WRIGHT, W. S., L.S.A., has been appointed Certifying Surgeon under the Factory Act for the Wool district of the county of Dorset.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ASYLUMS COMMITTEE OF LONDON COUNTY COUNCIL, Epileptic Colony, Ewell, Surrey.—Assistant Medical Officer. Salary £200 per annum, with board, apartments, and washing.

BETHLEM HOSPITAL.—Two Resident House Physicians. (unmarried) for six months. Honorarium at rate of £25 each per quarter, with board and residence.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES, John Bright-street, Birmingham.—Clinical Assistant. Honorarium at rate of 52 guineas per annum.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Surgical Officer. Salary £60 per annum, with board, washing, and attendance.

BIRMINGHAM CORPORATION.—Medical Officer of Health. Salary £1000 per annum.

BRIGHTON THROAT AND EAR HOSPITAL, Church-street, Queen's-road.—Non-resident House Surgeon for six months, renewable. Salary at rate of £75 per annum.

CHICHESTER INFIRMARY.—Honorary Medical Officer.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Junior House Surgeon, unmarried. Salary £80 per annum, with board, lodging, and washing.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon. Salary £110, with board, residence, and washing.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—House Surgeon. Salary £100 per annum. *Also Assistant House Surgeon.* Salary £70. Both with apartments, board, and laundry.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Physician for six months. Honorarium of £25, with board and residence.

EAST SUFFOLK AND IPSWICH HOSPITAL.—Second House Surgeon, unmarried. Salary £80 per annum, with board, lodging, and washing.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, S.E.—Anæsthetist. Honorarium £25 per annum.

GLASGOW SAMARITAN HOSPITAL FOR WOMEN.—House Surgeon (female).

GREENWICH UNION INFIRMARY.—Junior Medical Officer. Salary £100 per annum, with apartments, rations, washing, &c.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—House Surgeon, unmarried. Salary £75 per annum, with residence, board, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Physician, unmarried, for six months. Salary £20, with board and residence.

HOSPITAL FOR WOMEN, Soho-square, W.—H
months; salary £30 for that period. Also

INDIAN MEDICAL SERVICE, India Office, Lon
for not less than Sixteen Commissions
Medical Service.

KETTERING AND DISTRICT GENERAL HOSPITAL.—House Surgeon. Salary £75 per annum, with apartments, board, and laundry.

LIVERPOOL EYE AND EAR INFIRMARY.—House Surgeon. Salary £80, with residence and maintenance.

LIVERPOOL, MILL-ROAD INFIRMARY.—Assistant Medical Officer, unmarried. Salary £120 per annum, with board and apartments.

LONDON HOSPITAL, Whitechapel, E.-

MIDDLESEX HOSPITAL, W.—Director
Salary £500, rising to £800 per
ship, value £105 per annum.

NEWCASTLE-UPON-TYNE CITY ASYLUM, Gosforth.—Assistant Medical Officer, unmarried. Salary £140 a year, rising to £160, with apartments, board, and laundry.

NEWCASTLE-UPON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary £160, for first

NEW HOSPITAL FOR WO ouse Surgeon, and
Resident Medical Offi

NORTHAMPTON GENERAL HOSPITAL.—Assistant House Surgeon, unmarried. Salary £75 per annum, with apartments, board, attendance, and washing.

NORTH DEVON INFIRMARY, Barnstaple, Devon.—House Surgeon. Salary £80 per annum, with board, residence, and washing.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer, also Assistant Resident Medical Officer, for six months. Salary at rate of £50 per annum in each case, with board, residence, and washing.

POPLAR HOSPITAL FOR ACCIDENTS, Poplar, E.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board and residence.

ROYAL ALBERT HOSPITAL, Devonport.—Resident Medical Officer, unmarried. Salary £100 per annum, with board and lodging.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Member of the Court of Examiners.

SALISBURY INFIRMARY.—House Surgeon. Salary £100 per annum. Also Assistant House Surgeon. Salary £75 per annum, with apartments, board, and washing. Both unmarried.

SEAMEN'S HOSPITAL SOCIETY ("DREADNOUGHT").—Senior House Surgeon and Registrar. Salary £100 per annum, with board and residence.

SHEFFIELD ROYAL HOSPITAL.—Junior Assistant House Surgeon, unmarried. Salary £50 per annum, with board, washing, and apartments.

SOCIETY OF APOTHECARIES OF LONDON.—Examiner in Physiology.

SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon, unmarried, for six months, renewable. Salary at rate of £70 per annum, with residence, board, and washing.

UNIVERSITY OF GLASGOW.—Additional Examiner for Degrees in Arts, Science, and Medicine, with special reference to Zoology. Salary £50 per annum, with travelling and hotel expenses.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House Surgeon. Salary £50 per annum, with board, lodging, washing, and attendance.

WESTMINSTER GENERAL DISPENSARY.—Resident Medical Officer. Salary at rate of £120 per annum, with rooms, gas, coal, and attendance.

WEST RIDING ASYLUM, Wadsley, near Sheffield.—Fifth Assistant Medical Officer. Salary £140, rising to £160, with board, &c.

YORK COUNTY HOSPITAL.—House Physician. Salary £100 per annum, with board, residence, and washing.

AN appointment as Medical Referee under the Workmen's Compensation Act is vacant for Colchester, Chelmsford, Braintree, Dunmow, Halstead, Harwich, and Maldon County Courts.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Nailsworth, Gloucestershire; North Wheatley, Nottinghamshire; Tullow, in the county of Carlow; Cahir, in the county of Tipperary; Grangemouth, in the county of Stirling; Aboyne, in the county of Aberdeen; and at Ballyduff, in the county of Kerry.

Births, Marriages, and Deaths.

BIRTHS.

BROWN.—On May 9th, 1903, at Mount Lodge, Silver Valley, Callington, Cornwall, the wife of George Brown, M.R.C.S. Eng. (late of 6, Gibson-square, Islington, N.), of a daughter.

FURNIVALL.—On May 9th, at Weymouth-street, W., the wife of Percy Furnivall, F.R.C.S. Eng., of a daughter.

HEPBURN.—On May 6th, at South Lowestoft, the wife of Malcolm L. Hepburn, M.D., F.R.C.S., of a daughter.

WATSON.—On May 6th, at the Hollies, Leigh-on-Sea, the wife W. Douglas Watson, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGE.

FISH—SOUTHON.—On Tuesday, May 12th, Cecil Edgar Fish, M.B., M.R C.S., B.A. Cantab., of Llanbedr Hall, Ruthin, to Susie Constance, daughter of the late Richard Southon, of Port Elizabeth, S. Africa, and niece of Thos. E. Fuller, of 39, Hyde Park-gate, S.W.

DEATHS.

BAGSHAW.—On May 6th, at Carlisle House, Eastbourne, Thomas Washington Bagshaw, M.A., M.D. Cantab., in his 55th year.

BARCLAY.—On May 9th, at Amberley, Glos., Wilfred Martin Barclay, F.R.C.S. Eng., youngest son of the late Surgeon-General Charles Barclay, Madras Army.

BIRKETT.—On May 8th, at Westbourne Rectory, Sussex, Edmund Lloyd Birkett, M.D. Camb., F.R.C.P. Lond.

SCOTT.—On April 27th, at Tivoli, near Rome, Colonel Frederick Beaufort Scott, C.M.G., R.A.M.C., very suddenly, in his 65th year

N.B —A fee of 5s. is charged for the insertion of Notices of Births Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

A LADY'S VIEWS.

OUR attention has been called to an article published in the *Star* of Wednesday, April 22nd, entitled "The Medical Trade Union," and written by a Dr. Helen Bourchier. The article is the usual rubbish to be found in many lay papers when they begin to discuss the medical profession at large, as is sufficiently indicated when we say that the "Medical Trade Union" appears to be one of the lady's terms for the General Medical Council. The only point of the whole article that is worth attention is the fact that it should have appeared in a well edited evening journal with a deeper sense of the responsibility which it owes to the public than many of our popular newspapers. The articles in the *Star* on literature and art are sound honest journalism With regard to matters medical the paper is frankly antagonistic to our profession, probably from a desire to show that it speaks for the public and not for a section. We do not suppose, however, that it desires to give currency to complete misstatements. We should like to know how such rubbish as this found its way into the columns of a responsible paper. "A doctor must belong to the General Medical Council, or by Act of Parliament he is forbidden to sue for his fees in a Court of Law," &c. Thus Dr. Helen Bourchier, who seems to think that all the 37,000 registered practitioners are members of the General Medical Council, a body which she has mixed up with the British Medical Association or with the official roll of the profession. The gist of her article is to strike a note of warning against the Medical Act Amendment Bill because "it proposes to give greater powers to the already too powerful General Medical Council." "First," she says, "the Council is to have power to suspend a registered practitioner for any length of time it sees fit." She is of course utterly unaware that the reform is being taken in the direct interests of men whom she is trying to regard as victims—viz., those who fall under the unfavourable notice of the Council. At the present moment the General Medical Council can inflict but one form of punishment All "*infamous conduct in a professional respect*," whether it be the procuring of criminal abortion or the unfortunate wording of an advertisement, the traffic in secret cures or the improper use of an assistant, is punished in the same way—the offender is struck off the roll of the medical profession. The desire of the Council is to have some scale of penalties so that this tremendous punishment may not be meted out equally for the serious offence and the venial lapse. The power that the Bill would give the Council is the power of mercy—a discretion enabling it to make the punishment fit the crime, whereas now it is compelled to punish great and small offenders alike. The body that is trying to effect this reasonable change is stigmatised by this lady as "the modern Star-Chamber commonly called the General Medical Council." With regard to the writer of the article in the *Star*, we have a shrewd idea that nothing that we could ever say would lead her to alter her views. Not being herself on the Medical Register and having no official status entitling her to practise medicine in this country she girds at the General Medical Council perhaps to show that it is not her want of registrable qualifications but the narrow organisation of the Council that prevents her from practising medicine. We know this view · it is the line taken up by every advertising quack in the country. The General Medical Council is not above criticism, for the Acts of Parliament by which it was created and under which it has been amended are imperfect. But the General Medical Council exists for the protection of the public and not of the medical profession, as everyone knows. By keeping an official roll it makes the action of the public in consulting quacks a wilful act, and by purging that roll of wrongdoers it safeguards the public's interest

ERYTHROXYLUM COCA.

ACCORDING to the British Pharmacopœia the dried leaves of *Erythroxylum coca*, from which cocaine is extracted, are imported from Bolivia and Peru The May number of the *Illustrated Scientific News* states that this plant, among others of medicinal value, is now being cultivated experimentally in the Victoria Botanical Garden of the Cameroons, German West Africa, but a firm of alkaloid makers in Germany, to whom some of the leaves were sent, found them to contain only 0 28 per cent. of total alkaloid.

SOLICITORS, THEIR CLIENTS, AND THE MEDICAL ATTENDANT.

To the Editors of THE LANCET.

SIRS,—I should be glad of your opinion on the following case. I was called in by a Miss C to attend her I was informed by my patient that her account would be paid by her solicitors and I sent it to them, my patient writing to them at the same time requesting payment. The solicitors objected to the amount of the fees, although they acknowledged that they were the usual ones and that they had instructions from my patient to pay the account as it stood. In spite of this I was compelled to reduce my charges to the extent of £3 in order to get it settled. My patient told me on subsequent visits that pressure was being brought on her to change her medical attendant but that she had no wish to do so. However, that this pressure was successful is proved by the fact that three days after my visit to my patient, and when she had assured me of her confidence in my care and attention to her, I received a curt letter from the solicitors informing me that they had written instructions from Miss C to dismiss me from the case and call in another medical man. No explanation was given me of this extraordinary conduct of a firm of solicitors to their client's medical attendant and it appears to me that if the medical man in attendance in a case is to be in the power of a solicitor in this way his position will be unendurable, but I hope it to be a unique example of a solicitor exceeding his duty and unduly using his position to have a medical man dismissed from his patient. I am, Sirs, yours faithfully,

May 12th, 1903 M.R C S. Eng.

*** It is to be regretted that our correspondent made any reduction in the usual fees at the instance of the solicitors, unless he knew that his patient was in pecuniary difficulties. We cannot express any opinion upon the attitude taken up by the solicitors generally, as we know nothing of their client or the circumstances in which they are acting for her.—ED. L.

NO MORE DEATH.

THE following extraordinary card has been brought to our attention by readers living in one of the southern suburbs. It is circulated publicly and is presumably a counterblast upon the part of the Christian Scientists to the just ridicule of their absurdities which recently emanated from the pulpit at Plaistow, Kent (*vide* THE LANCET, March 21st, p. 823).

GLORIOUS NEWS!!

CHRISTIAN SCIENCE FOR ALL!!

No more Aches and Pains! No more Sighs, Sorrows and Suffering!
No more Medicines, Crutches and Splints! No more Operations!
No more Church Services and Sacraments!
No more Easter Offerings! No more Doctors' Bills!
NO MORE DEATH!
Only have Faith. Faith and Illness cannot coexist.
Waste no more money on Churches and Hospitals; Burn them or lock them up.

DOWN WITH PARSONS AND DOCTORS AND LIVE FOR EVER!!

If this silly sect outlives the attacks of Mark Twain it evidently contains within itself the elements of its death No creed, the followers of which could produce such desperate rubbish, can hope for support from thinking people, and some of the persons who at present contribute to the maintenance of Mrs Eddy as a divine person will soon cease from bolstering up a faith that is born of hysteria and nurtured on lies What does "No More Death" mean in this circular? Does any Christian Scientist want to wager that Mrs. Eddy will live till, say, she is 100? It has been suggested that the card has been manufactured with the intent to bring *Christian Science* into ridicule Perhaps, but we think that the composition looks genuine

WANTED—A HOME

To the Editors of THE LANCET.

SIRS,—I wish to hear of an institution where a female patient could be given rest and massage treatment at moderate expense and shall be greatly obliged to any correspondent who may be able to inform me of such. I am, Sirs, yours faithfully,

S. KELLETT SMITH, F.R.C S. Eng.

23, Russell street, Liverpool, May 11th, 1903.

A WARNING.

To the Editors of THE LANCET.

SIRS,—May I through the medium of your columns warn intending applicants for the post of "doctor" to the St. Luke's Hospital, Chemulpo, Korea, to make a searching inquiry into the nature of this [illegible]

I am, Sirs, yours faithfully,

W. A. ANDERSON, M B. Edin.

Denbigh road, Bow. E. May 9th, 1903.

THE PROSTITUTION OF THE POST OFFICE

THE Post Office having confessed its inability, or its unwillingness, to do anything to stop the flood of betting circulars, lottery advertisements, and notices of quack medicines which daily and hourly infest the letter-boxes of His Majesty's lieges we are going to refer to the matter again. Various correspondents have forwarded to us certain slips of blotting paper which they have received from America in open envelopes The blotting paper, against which as blotting paper we have nothing to say, is printed over with testimonials to the virtues of a certain drug and, moreover, emblazoned in large letters [illegible] evidently intended to be laid on a writing table [illegible] sufferings of women? Thus, for example: "Mrs. E. B., aged 29, married four years, no children, had suffered every month with dysmenorrhœa and a somewhat fœtid discharge." We are sorry to see, too, that the slips of blotting paper in question tell readers that the drug can be obtained through an English agent. The drug in question may be a good one for all we know but it is not fitting that any respectable firm should advertise its wares in this manner and it is still less fitting that His Majesty's Postmaster-General should make himself the agent for the transmission of such nastiness.

POINTS IN ETIQUETTE.

To the Editors of THE LANCET.

SIRS,—Permit me to "propound a case for your arbitrament." L.R.C.P. is a general practitioner in attendance upon a patient, Mrs. B. Dr. C is a consultant, a Fellow of L.R.C.P.'s college and a former lecturer in the school where he was educated. Mrs. B, desiring a second opinion, writes (irregularly, of course) to Dr. C, requesting his advice. Dr. C, on learning that L.R.C.P. is in attendance, declines to see her except in consultation and advises her to communicate with L.R.C.P. and to ask him to make the necessary arrangements. Mrs. B thereupon requests L.R.C.P. to arrange a consultation with Dr. C. L.R.C.P. declines to do so, but writes to Dr. C, saying that a consultation is unnecessary, but that, since he (L.R.C.P.) understands that Dr. C wishes to see the patient, he may do so if he likes. Dr. C informs L.R.C.P. that it is not he who wishes to see the patient, but the patient who wishes to see him, and declines to have anything to do with the case except in consultation. L.R.C.P. replies, inclosing his communication in an envelope addressed to "Mr. C." He again declines the consultation on the ground that Mrs. B is quite satisfied with the treatment she is receiving and accuses Dr. C of interfering with his patient. To this Dr. C replies, regretting the tone of L.R.C.P.'s communication, again repudiating the charge of interference, and stating that the rules of the profession require a consultation. Has L.R.C.P. any grievance against Dr. C? Is he justified in accusing him of interference? Is L.R.C.P. within his right in declining the consultation? I am, Sirs, yours faithfully,

May 7th, 1903. IATROS.

*** The right to demand a consultation rests with the patient quite as much as with the general practitioner. Therefore if Mrs. B wishes for a consultation L.R.C.P. must agree to her wishes or withdraw from the case. From the account before us Dr. C. has acted perfectly properly and L.R.C.P. has not.—ED. L.

PRIZE FOR A DUST-ARRESTING RESPIRATOR.

UNDER the terms of the Benjamin Shaw trust the council of the Society of Arts is offering a prize of a gold medal, or £20, for the best dust-arresting respirator for use in dusty processes of manufacture and in dangerous trades. Full particulars of the conditions which the apparatus will be required to fulfil can be obtained from the secretary of the Society of Arts, John-street, Adelphi, London, W.C. The competition is not limited to British subjects and is open until the end of the present year.

A CURIOUS ADVERTISEMENT.

THE following curious advertisement appeared in the *Shields Daily Gazette and Shipping Telegraph* of March 17th last. This paper, by the way, claims to be the oldest daily newspaper in the provinces, having been established as an evening daily in 1855, although originally established in 1849 as a weekly newspaper:—

PUBLIC NOTICES.

A DEBT OF HONOUR due to Dr. Bains for the most prompt and careful attention paid to my beloved wife during her severe illness, trusting that the people in the Borough of South Shields will patronise his profession; we are also very greatly indebted to all our friends for the sympathetic kindness and attention given to my wife during her trouble; also the kindness and respect shown to her by our friends from Tynemouth Castle and in the vicinity of Tynemouth on the 15th inst., when on that date she was interred at Harton Cemetery. I also wish to bring to notice the manner in which my most esteemed friend, J. Milnes, catered for the same, and sincerely trust that our friends in South Shields will appreciate and patronise 84 New Market Dining Rooms.—Signed, JABEZ HAWKINS SHEPPARD
and A. H. EWART,
181 Victoria Road. her most bereaved husband and father.

We do not see the name "Bains" in the Medical Register or the Medical Directory, but we trust that if the gentleman referred to is a qualified medical man he received not only the "Honour" but something more substantial.

POST-MORTEM POLITENESS.

A CORRESPONDENT of the *Law Times* sent to that journal a letter in the course of which he said: "Some time since we gave notice to the Land Registry of the deposit of a land certificate which had been made by way of creating an equitable charge. Then the equitable mortgagee for whom we gave the notice died and probate was registered at the registry. Shortly afterwards the equitable charge was paid off and all the executors signed and sent to the registrar a withdrawal of the notice of deposit. Thereupon the registry thoughtfully posted a notice addressed to the deceased at his earthly place of business which runs as follows: 'To A.B.—An application, dated the 25th March, 1903, signed by your executors and purporting to be a withdrawal of notice of deposit of land certificate affecting the title above referred to, has been left in this office for registration. If you have any objection it should be stated in writing.'" One of the executors thereupon wrote to the deceased's solicitors saying that as he was not in communication with the other world he could not say whether the deceased had any objection or no. As we believe that an executor has no *locus standi* until the party for whom he is executor is dead we should very much like to know why the registry wrote to a dead man and in what manner they expected him to reply. But the delicate feeling of the registry is beyond all praise and the only parallel of which we can think is the case of a poor woman whose two children had been invited to a Christmas-tree at a hospital. On the appointed day only one child, a girl, arrived and on the house physician asking where her brother was she said, "Please, doctor, mother said I was to say she was very sorry she couldn't let Tommy come." Whereupon the house physician expressed a hope that Tommy's absence was not on account of illness and received the startling answer, "Please, doctor, 'e's dead."

A CORRESPONDENT asks us in connexion with an analytical report which appeared in our columns upon a natural mineral water (Hunyadi János), What exactly is the meaning of "constant composition?" Does the expression "a composition that is constant" convey a clearer idea to our correspondent? If not, and if it be possible to make what is already plain English plainer, we may add that the expression means that the proportion of dissolved salts in the water is always the same, that the ratio of salts to each other does not vary, and that therefore the therapeutic effect may be expected to be the same with the same doses.

◆

P. Q.—1. A stamp must be affixed by anyone desiring to give a legal receipt for a sum of money of £2 or over. We cannot enter into the question of the exceptions to this general rule. The person who has paid the money can insist upon the receipt being given to him in legal form, but as a matter of practice no such demand is made in very many instances, while some firms supply their employés with receipt forms already stamped. 2. As a rule the person who buys a practice protects its sale value, in case he should desire to sell it again, by preventing the occurrence described by our correspondent. The wording of the agreement will settle the question.

Agricola.—The method of payment is as novel to us as it is to our correspondent. We are hardly prepared to express any opinion upon its possible working, but we think that perhaps 250 monthly tickets would be about represented by the suggested sum. The arrangement must be tried before any definite verdict can be passed on it.

Vendor.—We do not think that there is any established custom, although it seems to us a fair thing to ask three years' gross receipts. The circumstances are such that it would be well to employ an agent, giving him some discretion as to terms but fixing, of course, the minimum.

Locum will find in various issues of THE LANCET all the information he requires. Different States of the United States have different regulations with regard to medical practice. *Vide* THE LANCET, vol. ii., 1896, pp. 7[illegible]3 and 969.

Justitia.—We quite agree with our correspondent that the matter hardly needs comment. That being his opinion we wonder why he sent us the particulars.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 14th, 1903.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
May 8	29·70	E.	0 40	74	54	45	46	49	Overcast
" 9	29·70	S.W.	—	76	56	48	48	50	Hazy
" 10	29 75	W.	0·55	96	59	48	47	50	Cloudy
" 11	29 77	N.E.	0 69	80	53	46	45	46	Raining
" 12	29 64	N.E.	0·03	109	56	42	42	46	Cloudy
" 13	29 88	WSW	—	105	61	41	48	50	Fine
" 14	29 98	W.	—	90	60	49	52	56	Cloudy

During the week marked copies of the following newspapers have been received: *Lincolnshire Echo, Portsmouth Evening News Hertfordshire Mercury, Durham County Advertiser, Southern Times and Dorset County Herald, South London Press, Highland News, Burnley and District Times, Staffordshire Sentinel, Westminster Gazette, Windsor and Eton Express, Standard, Manchester Guardian, City Press, Mid-Sussex Times, Walsall Advertiser, Birmingham Daily Mail, Yorkshire Mercury, Herts Advertiser, Reading Mercury, Mining Journal, Midland Medical Journal, Surrey Advertiser, &c.*

Medical Diary for the ensuing Week.

OPERATIONS

MONDAY [illegible] P M), St
Thoma [illegible] 2.30 P.M),
Middle [illegible] (2 P M),
Samari [illegible] oho square
(2 P M [illegible] (4 P M),

TU[illegible]

(2 P M)

SATURDAY (23rd) —Royal Free (9 A M) London (2 P M), Middlesex (1 30 P M), St Thomas's (2 P M), University College (9 15 A M), Charing Cross (2 P.M), St George s (1 P M), St Mary's (10 P M), Throat Golden square (9 30 A M), Guy's (1.30 P M)

At the Royal Eye Hospital (2 P M), the Royal London Ophthalmic (10 A M), the Royal Westminster Ophthalmic (1 30 P M), and the Central London Ophthalmic Hospitals operations are performed daily

SOCIETIES

MONDAY (18th) —MEDICAL SOCIETY [illegible]
Cavendish square, W) —8 30 P M
tion by the President 8 45 P M
K C V O Some Reflections, main
Position of Operations in the Practice of Surgery

TUESDAY (19th) —PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W) —8.30 P M General Meeting Election of Officers Card Specimens:—Dr C P White: (1) Atrophied Kidney, (2) Tuberculous Cavities in the Liver —Dr. Dudgeon (1) Multiple Cyst of the Mesentery; (2) Tuberculous Cavities in the Liver —Dr H M Fletcher: Congenital Cystic Disease of the Liver —Dr Drysdale Aortic Aneurysm rupturing into Left Ventricle Papers:—Dr R S Trevor Multiple Aneurysms of the Splenic

Orbit
[illegible] CAL SOCIETY (70 Victoria
[illegible] pers —Mr C P Hooker:
[illegible] of Water in a Well —Mr

[illegible] nover-square, W) —8 P M

[illegible] AL AND CLIMATOLOGICAL
[illegible] P M General Meeting
[illegible] port of Council 5 P M
[illegible] Few Jottings in Physio-
[illegible] at the Monico Restaurant,

HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street,
E [illegible]

FRID[illegible] uare
V [illegible] s for
S [illegible] real
I [illegible] d to
a [illegible] is —
L [illegible] the
Heart.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c

MONDAY (18th) —MEDICAL GRADU[illegible]
[illegible] Treatment of some Injuries and
[illegible] ATES' COLLEGE AND POLYCLINIC
[illegible] Dr C O Hawthorne: Clinique
[illegible] Organs.

POST GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W).—5 P M Mr C. Williams: X Rays

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square Bloomsbury) —3.30 P M Mr. Gunn Visual Fields in Medical Diagnosis

How.

THURSDAY (21st) —MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22, Chenies street, W C) —4 P M Mr Hutchinson: Clinique (Surgical) 5 15 P M Dr G Drummond Robinson: Uterine Displacements

POST GRADUATE COLLEGE (West London Hospital, Hammersmith road, W) —5 P M D[illegible] Nephritis

ROYAL INSTITUTION [illegible] W) —
5 P M Prof S H [illegible]

NORTH EAST LONDON [illegible] Hos
pital N) —4 P M ([illegible] Derma-
tological

[illegible] ION AND DISEASES OF THE
[illegible] Dr. J. E. Squire: The
[illegible] (Post Graduate Course)
[illegible] Dr Eden: Gynæcological
Demonstration [illegible]

THE HOSPITAL F[illegible]
4 P M Dr Pen[illegible]

GUY S HOSPITAL [illegible]
logical Theatre)

[illegible] COLLEGE AND POLYCLINIC
[illegible] Mr T Collins: Clinique
[illegible] ites of the Gastro-intestinal
Canal

POST GRADUATE COLLEGE (West London Hospital Hammersmith road, W) —5 P M Dr Moullin Pelvic Inflammation

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IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

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We cannot prescribe or recommend practitioners

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vol. ii., 1896, pp. 768 and 969 use
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Justitia.—We quite agree High
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An Address

ENTITLED

SOME REFLECTIONS, MAINLY ETHICAL, ON THE PRESENT POSITION OF OPERATIONS IN THE PRACTICE OF SURGERY.

Being the Annual Oration of the Medical Society of London, delivered on May 18th, 1903,

BY SIR WILLIAM H. BENNETT, K.C.V.O., F.R.C.S. ENG.,

SENIOR SURGEON, ST. GEORGE'S HOSPITAL, ETC.

MR. PRESIDENT AND GENTLEMEN,—My first duty is to tender to you, Sir, and to the council of the society my thanks for the compliment which it has been thought right to pay me in the invitation to deliver your annual oration. I must at once confess that I have only been induced to place myself in a position which is so much beyond my province by the feeling that it would be ungracious to decline an invitation which conveys so much.

I am sure that I am right in saying that only those whose experience extends backwards beyond the time when the great work of Lister was made known and its influence upon the work of surgeons generally became manifest, can in any degree truly realise the enormous changes—I might almost say miraculous changes—which followed in the practice of surgery. I am therefore thankful that my medical education commenced before the Listerian era, which, after all, is not so many years ago—a time when septic diseases, like erysipelas, cellulitis, osteomyelitis, and kindred conditions, were common consequences of operations and formed a large proportion of hospital work—a time when the salvation of the patient and the reputation of the surgeon not infrequently depended upon the appearance of the pus which was called laudable—a time at which the author of one of the most successful text-books of the day took the opportunity of congratulating his readers that the science of surgery had advanced so far that but little further progress could be looked for, and when one of the foremost surgeons in London chose as the subject of his presidential address at the Clinical Society, "Pyæmia in Private Practice," and gave many illustrative cases. The practice of surgery in times like those, when the main object was the avoidance of operations because the results were so often disastrous and when an uncomplicated progress after operation was the exception, necessitated an amount of consideration in deciding upon the radical treatment of a case and an alertness in watching and dealing with the subsequent complications which cannot be appreciated by those whose experience has commenced in later times. The complete realisation of the fact [illegible], thanks to Lister's labours, operations could [illegible]rmed with comparative safety, naturally not onl[illegible]he radical treatment of many conditions [illegible] had been allowed to end fatally without any [illegible]pt to obviate such a result, but ushered in [illegible] operation of innumerable conditions which, [illegible]dangering life, were the cause of so much [illegible] many individuals as materially to diminish the [illegible]sefulness of the general community. And as the con[illegible]e in the safety of operative methods grew with surgeons generally, the treatment of certain conditions, in themselves harmless at first but possessing potentialities for evil later, became common, and so arose the class of operation which may be called preventive. Finally, there came the utilisation of operations for diagnostic purposes—for example, the opening up and inspection of the abdominal, thoracic, and cranial cavities, leading ultimately to the

APOTHEOSIS OF THE EXPLORATORY OPERATION.

The promise of such enormous benefits from operative treatment which could be used with comparatively small risk was followed by an amount of energy and enthusiasm in the direction of this radical form of treatment and in the invention of operations which came at one time perilously near to the limits of reason and there seemed a danger that the operation influence would reach to the dignity of an obsession—a condition of things which hardly tended to the best interests of surgery. The pendulum has in due course commenced its backward swing and a position has now been reached from which the rational bearings of surgical operations generally may be considered in relation to the risks which they entail, the benefits which are derivable from them, and the limits which legitimately control their application.

In what follows it must be understood that I have little desire to influence and still less to teach; that I am merely giving views and describing impressions which are those of one who during an experience which extends from the time just anterior to the commencement of the period of surgical cleanliness has been carefully watching the progress and general trend of surgical affairs and who, I have reason to believe, enjoys a fair share of operative work in London at the present time and so may be allowed to have some knowledge of the failures as well as of the successes which are necessarily associated with a rather large experience. Speaking generally, I am compelled to say that it seems to me that the tendency towards operative measures, although less than it was a few years since, is still, on the whole, too strong, and that operations are yet approached in too light a spirit, not for the reasons to which I have already referred, but because a prolonged familiarity with them has led to an under-estimation of the risks which they entail and to a forgetfulness of the defective results which, more often than is commonly thought, follow upon them. I am further bound to feel that the present position of things tends far too much to the reduction of the surgeon to the position of the mere mechanic. Indeed, it is not long ago that a surgeon is reported to have said that he considered himself nothing much better than a good carpenter—a statement which was, if I may be respectfully allowed to say so, a greater tribute to his modesty than to his sense of appreciation of the realities of his profession.

THE FOUR STAGES OF SURGICAL LIFE.

The working life of every surgeon may, I venture to think, be divided into three principal stages. In the first, or [illegible] are apt to obscure wider and often more important issues in the way that a penny piece, if placed sufficiently near the eye, will obscure the sun. Towards the end of this stage those whose sense of infallibility is not too strong begin, I fancy, to realise the truth of what may be expressed by an ancient classical adage, slightly modified: *Nemo repente fit chirurgus.* At about this time in the evolution of the surgeon the tendency shown rather later to operate less freely and apparently with less energy sometimes leads to the conclusion by those who are yet in the early stage of their development that this is due either to indifference or to an inability to keep abreast of the times, the real factor in the matter, which is the dictate of increasing experience, being overlooked.

In the second stage the gathering of experience and the lessons of some failures and disappointments lead in the majority of men to maturer judgment and a better understanding of the proper relation of things. It is towards the end of this period that the greater number of surgeons begin to be rather less aggressive in the direction of the purely operative treatment and show indications of approaching it with more consideration than hitherto, an attitude which is the result, as I have already said, of increased experience and a more accurate knowledge of the real value of operations as such. It is at this time that a sober retrospect on the part of those whose sense of proportion is sound will, I am confident, recall to mind more instances than one in which an operation performed in all good faith had better, for the good of the patient and perhaps for the reputation of the operator, have been left alone.

With the third stage comes the inclination for the surgeon to confine himself to certain operations with which he feels himself most at home and thus to some extent his practice becomes eclectic. The increase of experience and a maturer judgment at the same time becoming more prominent characteristics he is enabled to exert a far-reaching influence of the greatest value.

There is a fourth stage, of course, in the surgeon's life when, happy in the contemplation of an honourable career well spent, it is to be hoped that he has much money at the bank—a time when, although operations [illegible] things of the past, there remains that never-failing judgment, the outcome of a vast experience the importance of which it is impossible to over-estimate, although I fear at times it is not altogether appreciated at its full worth by some of us.

Operation Risks in Mortal Cases.

I presume that it cannot seriously be contended that any operation can be made absolutely safe, even if it be assumed that the operator is as perfect as an operator can be, for apart from merely accidental risks some account must be taken of the effects of the anæsthetic, the constitutional peculiarities of the patient, the circumstances in which the operation is performed, and the qualities of those who assist in its completion. The risk incurred may be an immediate danger to life, it may be a possibility of leaving a worse condition than existed before the operation, or it may be merely the chance of defective results.

With regard to the danger to life, apart from certain accidental risks which must be connected with all operations, it is clear that in any mortal condition which seems susceptible to relief by operation no risk is too great to run provided that there is a real chance of success, but I do not think that the mere fact that a patient is apparently bound to die unless operated upon is in itself a justification for operation; and operations upon moribund and on semi-pulseless people, save in very exceptional circumstances, seem to me to be mischievous and unscientific, since they cannot, from the nature of things, benefit the patient and they reflect but poorly upon the practice of surgery. The amount of risk which can be justifiably run in these mortal cases depends greatly upon the question as to whether the lesion is due to curable—that is, probably non-malignant—conditions or whether it is caused by malignant disease or by some other incurable state. It is obvious, I suppose, that there is practically no limit, as I have already said, to the risk which may be run in dealing with a curable condition, whilst in a case of malignant disease, for example, in which the operation as a rule may be regarded as palliative, grave consideration should be given to the question of risk before embarking upon a treatment which at the best can probably only lengthen life for a period and may shorten it materially without affording much prospect or possibility of cure. On the other hand, the chance of shortening life by a little time may be legitimately taken when a cure is practically sure if the case turns out to be successful from an operative point of view. In all cases of this type the point of paramount importance is the realisation that the primary object is to save life and not necessarily to perform an ideal operation. I make no doubt that more than one life has been sacrificed by proceeding to the completion of an academic operation which might have been saved by the performance of a less serious proceeding in the first instance. This observation, although it applies generally to a number of cases, such, for example, as extensive disease about the neck and throat, the rectum, and other parts, seems to me to possess especial force in connexion with many of the large growths revealed by abdominal exploration, the risk of removal of which is generally altogether out of proportion to the benefit likely to be derived from the treatment, the mortality in such cases being high, whilst not a few really show no lethal tendency if the disease is left *in situ* after free exposure, and in some the disease finally disappears. Having regard to all the circumstances in cases of this type it appears to me that in the vast majority the proceeding to the extirpation of masses of disease which entails, for example, the taking away of large portions of the great blood vessels or other vital parts is rather an academical demonstration of the possibility of removing a growth than a treatment for the benefit of the patient, especially when it is remembered that, even with our present knowledge, it is practically impossible to say whether a growth is malignant or whether it is not by any other test than its clinical behaviour. The three following cases which have occurred in my practice within the past two years are sufficient to emphasise this fact.

Case 1.—A boy, 14 years of age, was found to have an apparently malignant growth of the right kidney and surrounding tissues. The vena cava was involved in the disease; many outlying nodules distinct from the main mass existed. One of these was removed and proved after examination to present microscopically all the characters of typical sarcoma No attempt at removal was made. The whole disease disappeared and the boy is now in the navy.

Case 2.—A young woman, aged 28 years, had abdominal section performed with the view to the removal of a mass on the left side of the abdomen below the umbilicus which seemed to be connected with the uterus. Upon exposure a large, and so far as could be judged a typical, mass of malignant growth was seen involving the omentum and the uterus, lapping around the left iliac vein and artery, with which it seemed to be inseparably connected. Secondary nodules in large numbers were scattered in the omentum in the immediate neighbourhood. No attempt at removal was made. The whole disease has apparently disappeared and the patient is in good health.

Case 3.—An abdominal section was made with a view to the removal of a tumour apparently involving the cæcum in a man, aged 48 years. The mass, which involved the cæcum as was expected, had the appearance of malignant disease; it was fixed and extended inwards by a flattened process to the middle line. In this the vena cava was imbedded. No evidence of obstruction had occurred and as the active growth appeared to be in a direction away from the bowel nothing further was done. It is now three months since the operation; the mass is smaller and is steadily decreasing, while the general health of the patient is continuously improving.

I have no doubt that in each of these cases the removal of the disease was mechanically possible, but it is hardly likely that all the patients would be alive now if the completion of ideal operations had been effected.

I mention these cases not because they indicate that completion of ideal operations should not under proper conditions be effected, but because they show clearly enough that even when operation is in progress the result of a case may depend upon much more than the dictates of mere craftsmanship. A more striking instance, perhaps, than any one of these was the case of a nurse who became a patient in St. George's Hospital on account of hæmatemesis in whose abdomen a large mass could be felt which proved, as was believed before laparotomy, to be connected with the stomach. It had upon exposure all the appearances of a large carcinomatous plate involving two-thirds of the anterior and under surface of the organ towards the pyloric end which was involved in the disease and was also adherent to a mass of glands which lay beneath it. The case occurred at about the time when the complete removal of the stomach was under discussion and I should, if the patient's condition had offered any hope of real success, have removed the greater part of the organ. As it was nothing was done; the mass disappeared and the patient resumed her work. I mention this case as it provides an excuse for referring to a remarkable difference existing in the experience of surgeons in malignant, or what seems to be malignant, disease of the pylorus and the parts continuous with it. It happens that my experience of the surgery of the stomach is large, but in all my dealings I have only met with three cases in which I have thought pylorectomy worth performing. The other cases have either been too advanced to justify the treatment or of too doubtful a nature to lead me to think it proper. All these doubtful cases have been treated by gastro-enterostomy, with uniformly good results. In a very striking case, in which several of those present were convinced of the malignancy of the disease and upon which I operated by gastro-enterostomy in 1887, the first case of the kind at St. George's Hospital, the man is alive now and following the occupation of a waiter. Seeing the large number of pylorectomies published by other surgeons in different parts of England it is clear that either my practice differs altogether from theirs or that the cases which come in their sphere of action are of a different kind from those with which I meet. However this may be, I am content with the result of my own experience which emphasises the truth of a dictum for which I have a profound respect and which could be illustrated by endless cases—namely, that when an equally good result is obtainable by two operations, one being distinctly less dangerous than the other, the best practice is to choose the milder method, although for the moment it may appear less brilliant in itself and perhaps less obvious in its immediate result.

Some Effects of Familiarity with Operations upon Their Use.

The effects of familiarity with operations in leading to their adoption in a manner which one cannot help feeling is not always quite discriminating are best seen in connexion with the operative treatment of certain conditions which are dealt with radically, either from the point of view of pure expediency or for preventive purposes—conditions, in fact, in which operation cannot be regarded as actually necessary and in which the proper application of the treatment must therefore depend entirely upon the judgment and experience of the surgeon concerned, the justification for an operation being principally its safety and a certainty, or at all events the strongest possible probability, of the desired result being assured In many of such cases it cannot, I think, be denied that the operative treatment has with some of us degenerated—I use the word advisedly —into a mere question of routine And it may be said without reservation that if a treatment becomes a routine method the danger of suppression of individual judgment in connexion with it becomes a reality For the better understanding of this contention, although many other illustrations could be offered, it is convenient to consider only two conditions which must be more than familiar to all of us—that is to say, disease of the appendix and varix. The removal of the appendix after the occurrence, or recurrence of certain symptoms may, I presume, without exaggeration be described as a routine practice now with many surgeons At the same time, it cannot be contended that the removal of the appendix is always called for or that it invariably relieves the symptoms for which the operation has been performed For the proper application of a treatment which may itself cause death (fatal results do sometimes follow the operation of removal of the appendix even in the quiescent stage), may not relieve the symptoms for which it has been carried out, and is sometimes followed by grave complications such as for example, extensive thrombosis, must clearly demand an amount of judgment in its application which is altogether incompatible with mere routine Further, in relation to this matter generally, it seems to me that the habit of frequently operating in any given condition tends automatically to an inclination to over estimate its gravity It is, for example, by no means certain that the lethal tendency of recurrent appendicitis is as great as we have come to suppose Many people live the ordinary span of life without operation who have been the subjects of frequently recurring attacks of appendicitis—a statement which receives considerable interest from the fact that it would be easy to indicate a number of persons in the medical profession who, whilst they are the subjects of recurrent appendicitis, show no great anxiety for operation

I have said that the removal of the appendix does not always immediately do away with the symptoms for which the operation had been performed The defective result in these cases depends, it seems, upon the serious implication of the cæcum itself in the disease. It is not so uncommon as is generally supposed for recurrent attacks of symptoms indistinguishable from those which occurred before the removal of the appendix to follow after the operation, either immediately or after an interval, in cases in which the original attacks have followed upon malaria dysentery, or typhoid fever, the explanation probably being that in such cases the disease is liable to be cæcal in its origin There have come under my notice cases in which the appendix has been removed for the ordinary symptoms of appendicitis so called, in which attacks indistinguishable from what is commonly called appendicitis followed after the operation It is true that after repeated subsequent attacks the symptoms gradually wore themselves out, but so they might have done in the absence of operation altogether During the late South African war I had a considerable experience of operations in cases of appendicitis in men invalided on that account and of these three cases in which symptoms arose after dysentery and malaria showed no immediate improvement at all after the operation In each of these cases the cæcum was at the time of operation seen to be the main seat of disease, the appendix in each, although it could hardly be called normal, was so slightly involved that no stretch of imagination could have saddled it with the cause of the symptoms and my impression is that in the light of subsequent events these cases would have been as well without operation as with it It would therefore seem that it might be worth the expenditure of some pains and some time in endeavouring to arrive at a diagnosis without operation between cases in which the cæcum is the original seat of disease and those in which the appendix is primarily at fault, an observation having a practical bearing to which I shall refer for another purpose a little later

Illustrations of a less debateable kind of the point I have just now in view may be afforded by cases which in themselves have no lethal tendency at all, such, for example, as uncomplicated varix of the lower limbs, which provides a large number of operations at the present time I know of few conditions which require the exercise of more judgment in arriving at a proper decision as to the desirability of operation than these cases of varix do The number in which operation is really beneficial is very small in comparison with the number of cases met with, moreover, the size of the veins bears no relation to the necessity for operation, inasmuch as in many of the cases in which the veins are largest operation is altogether unnecessary, and indeed often unjustifiable, mere abnormality having to be distinguished from disease Setting aside, therefore, such patients as come up for treatment to satisfy the requirements of the public services, the cases of this class in which operation is really indicated are few, save those in which objective trouble, such as pain or rapid increase in size, is present

Now, the operation for varix in subjects between the ages of 18 and 45 years may in sound subjects be regarded to be as safe as any operation can be and need not therefore in itself be regarded seriously—a fact which, I cannot help feeling, leads to the performance of operations in a certain number of cases of this kind which would not be so treated if the risk of the proceeding were sufficient to lead to a careful consideration of the bearings of the matter That this is so I am compelled to conclude by the fact that cases come under observation in which operations upon varix of the lower limbs have been carried out for the relief of symptoms undoubtedly due to flat foot which were subsequently relieved by the ordinary treatment for that affection And cases from time to time come under notice in which pains resulting from nervous disease have been apparently assumed to be due to extensive varix, which has consequently been operated upon with a view to the radical cure—an error of judgment which might have been avoided if the patellar reflex had been tested Had the treatment here been of a more dangerous kind I have no doubt that a sufficiently thorough examination would have been made to prevent the performance of operations which were more than unnecessary It would, if time allowed, be easy to give further illustrations of this kind

THE SAFETY OF OPERATIONS IN RELATION TO THEIR PERFORMANCE IN CERTAIN CASES

Going a point further I think it clear that the mere safety of an operation tends to obscure the fact that its results may not be invariably advantageous to the patient, a view which could be supported by fertile examples which would show, in cases in which the condition before operation had given rise to no trouble and in which, in fact, the radical treatment had been carried out for purely expedient or preventive purposes, that the consequences following are sometimes regrettable The percentage of cases in which unsatisfactory results follow is, of course impossible to ascertain, but the fact that such results do ensue is clear, because I see in the course of my experience—which I suppose cannot be very different from that of other people—cases in which operations performed by various surgeons are followed by such results Taking varix again, for example, cases occur in which thrombosis, permanent cold extremity, chronic œdema, and acute neuralgia follow operation in people who previously had suffered no inconvenience at all As a good example of this sort the last case of the kind which has come under my notice is worthy of mention The patient was a young girl of a highly sensitive temperament who, being distressed about some slight varix in both lower limbs, contrived to have operative treatment upon the veins, which had previously given no trouble at all, carried out Thrombosis in both limbs followed the operations and now, months after the treatment she is only just able to resume her ordinary vocation and it remains to be seen whether further trouble will arise It would, I presume, be foolish to contend that the operation would have been performed if it had been thought that any risk to life attached to its performance An interesting point arises here in connexion with the difficulty which presents itself to an operator in determining sometimes whether an operation is finally successful or not, because it is quite certain that a large percentage of those patients whose operations prove in the end unsatisfactory do not return for advice to the surgeon who originally operated, and I have reason to know that instances happen in which the original operator has considered, and sometimes, indeed, in good faith has recorded, a case as successful which has been under the care of another surgeon subsequently either for further operation or in consequence of unfavourable results following upon the original treatment. It is only a short time since that I heard, quite by chance, that a patient upon whom I had operated, as I thought successfully, had been treated subsequently by another surgeon for the same condition, presumably because my operation had failed to effect the object desired. And I have lately seen a patient who has already been operated upon for the same lesion by two surgeons, each of whom is, I believe, under the belief that the operation performed by him has been successful. Indeed, in this respect there is little doubt that many of us live in something like a fool's paradise, a fact which, in the study of statistics, is not to be regarded altogether with complaisance. It is, at all events, quite certain that the true value of a treatment cannot be estimated upon records of successful cases and it is a welcome and healthy sign when a distinguished surgeon, as happened a short time since, thinks it right to publish a series of unsuccessful results following upon operations of which he has had a large experience. In connexion with this question it is, I suppose, superfluous to insist that a successful operation should be held to mean one which achieves the end for which it is performed, whether that be the saving of life, the relief of pain, or any other object. The description of successful operations followed by the death of the patient has been fully satirised by Dickens and others before him and the matter would not be worth mentioning here were it not that apparently serious mention is sometimes made of cases in which successful operations have been performed without the saving of life or attaining some other end which was the real object of their performance. The use of the term "successful" in connexion with operations in such circumstances seems to me to be a juggling with words which is not quite consistent with the traditions of our profession, and that it should be so used is, I think, further evidence of the way in which the overwhelming importance now attached to operations themselves tends to obscure the more vital points at issue and sometimes, it must be admitted, goes dangerously near to leaving in the background the great truth that in all matters of this kind the interests of the patient and not the mere attaining of a mechanical achievement should be the surgeon's first concern.

The Exploratory Operation.

The results of the free employment of the exploratory operation have, on the whole, been greatly to the advantage of the patient and of the surgeon alike, but, as is the case with many other things, an exploratory operation is not always perfect in its results and, moreover, it cannot be regarded as altogether free from risk. It is sometimes said when discussing the propriety of making an exploratory operation that at all events no harm can come of it if no particular advantage is gained. But is this always the case? I find that within a comparatively short time I have been brought in contact with no less than 16 cases in which persistent troubles—arising, it has been said, after abdominal exploration—have been complained of. 10 of these came under observation on account of troubles connected apparently with the operation. In the others the fact of an exploration having been performed was only discovered accidentally in the course of conversation or in the course of examinations made in connexion with matters apparently unassociated with it. In five of these cases large ventral herniæ existed; in three cases persistent pain of an acute kind had followed about the region of the wound; in two there were sinuses; four patients had never been the same since the operation; one had continual incontinence of urine; and one had an ankylosed hip which was stated to have followed upon fever which came on after the operation. Fatal cases are also not unheard of. I have already said in another connexion that results like these in no respect negative the propriety of the exploratory operation as such, but only show that it cannot be regarded always as a trivial proceeding and that it should therefore be undertaken only when it is really necessary and not merely as a routine proceeding. Although the instances of defective results which I have mentioned are confined to the abdomen it would be easy to afford other examples, notably in the case of the knee In one respect, at all events, it is certain that the very free use of the exploratory operation does not make for the good of surgery. It cannot, I think, be denied that, speaking generally, the estimation in which the art of clinical diagnosis—by which I mean bedside diagnosis as distinguished from that of the operating theatre and the clinical laboratory—is held has declined since the free use of the exploratory operation. This must be patent to any acute observer of surgical affairs generally and it must be especially clear to those who are concerned in examining candidates for the various degrees and diplomas, as they have exceptional facilities for judging of the trend of clinical teaching in the various medical schools. In former times, in consequence of the risk generally involved in any but the simplest of operations, and sometimes even in them, it was essential to strain every faculty of observation to endeavour to arrive at a diagnosis before resorting to operation. Now, on the contrary, when the exploratory operation, which can, as a rule, be carried out with comparative safety, is an immediate means of clearing up a difficult diagnosis there is a disinclination to spend a great amount of time in arriving at a conclusion independently of operation which it is thought may be much more easily attained by exploration. In some respects, apart from any question of risk to life or other consequences, this condition of things is not advantageous, and especially is this the case from the educational point of view, for although, as I have said, the exploratory operation may often be a proper resource in the hands of those sufficiently experienced to appreciate its limitations, to the inexperienced and to the ordinary student its too common use is distinctly harmful, as it frequently leads to any careful attempt to make a non-operative diagnosis being regarded as a waste of time; and, moreover, it sadly depreciates in the minds of the same persons the inestimable value of the education of the eye and hand which is essential for the highly cultured practitioner, and which nothing affords so certain a means of obtaining as the delicate and gentle manipulations which should be inseparably connected with bedside diagnosis. Further, this effect of lowering the standard of bedside diagnosis tends too much, in my opinion, not only to exaggerate the importance of the purely operative aspect of surgery, but to reduce the surgeon to the position of the henchman of the physician, into whose hands the more delicate non-operative diagnosis must, as a matter of course, fall. I am not one of those who think that the present incidence of surgery is to the extermination of the physician—in fact, I believe he will become more and more essential as time goes by. At the same time I am strongly of opinion that it is not the duty of the surgeon to operate at the request of a physician unless he first assures himself that the conditions said to exist are actually present. To do so, it seems to me, is to lose sight of the respect which is due to surgery in the broadest sense. But it is clear that this ideal surgical position is only possible with those who have cultivated to the utmost the power of non-operative diagnosis. The surgeon is in this respect, in my opinion, a physician and something more. Be this as it may, I feel strongly that the performance of the exploratory operation as a mere routine treatment is to be regarded with apprehension, since it tends to the idea that the most careful attempts at arriving at a diagnosis without operation are unnecessary and so conduces to minimising the value of the cultivation of judgment in surgery—a deplorable thing, since judgment is the enemy of routine and routine is the bane of surgery. The exercise of the highest degree of astuteness in diagnosis is, indeed, often necessary before determining upon an exploratory operation. Operations, for example, on the abdomen when the lesion has been in the thorax are not unknown. It is only a short time since that I was called to a case with a view to operating for ruptured gut after a severe injury, in which it was only possible, upon the most careful examination, to determine without operation that the lesion was thoracic and not abdominal, a conclusion which not only negatived the propriety of operating, but probably saved the patient's life, as an abdominal exploration in the degree of collapse which was present must have almost certainly ended in death.

Some Effects of Operations upon Hospital Work; Methods of Operating; and the Attitude of the Public.

The effect of the tendency to regard operations as the main end of surgery has led to a complete change in the course of the last 20 years or thereabouts in the class of cases admitted into the surgical wards of the large hospitals of London, so much so that I believe that I am right in saying that, with the exception of accidents, the admission of patients in the ordinary way whose diseases do not offer a prospect of cure by operation is comparatively uncommon. All possible credit having been allowed to the extensive applicability of the operative treatment, I think that the exclusion of cases unsuitable for operation inflicts a hardship upon many patients and is bad for medical education generally. It would be interesting to know what becomes now of cases which were formerly admitted as a matter of course into the general hospitals, such as early tuberculous disease of joints, diseases of the spine, and many other conditions in which operation is not likely to be called for. It is at all events quite certain that there is no very great opportunity for the study in the surgical wards of the majority of our hospitals of cases which are outside the sphere of probable operation; and I am strongly of opinion that in every hospital a definite number of beds should be set aside for the exclusive benefit of patients suffering from conditions which, whilst curable, are not necessarily so by operation only.

An interesting matter in connexion with the details of operations themselves is the ignorance of the majority of us as to the methods used by other surgeons. This is the result of our seeing little or nothing of each other's work. That this should be so cannot be otherwise than unfortunate, although it is difficult to see the remedy in these times of rush and overwork. I am, however, sure that if we could each of us devote a certain time to watching the way in which operations are conducted by others educated in a different school we should all obtain a wider grasp of methods generally, greatly to the gain of surgery and to our own advantage. As it is, each man learns by experience the method by which he can himself most surely achieve in any given case the desired end; the methods of each surgeon, in fact, gradually become stereotyped which in some instances, unless I am deceived in my impression, leads to some intolerance with regard to the practice of others, since there is an inclination sometimes on the part of a surgeon to regard operations performed by any method other than his own as inefficient or unsuitable, failing to realise, by reason of his insulation, that what he can effect by one plan another operator can do as well, or perhaps better, by some other method. The greatest evil, however, of this condition of things is the fostering of routine operations in consequence of the assumption by some people, because they have no means of checking the view, that for a given condition only one operation is really effective, that being, of course, the *one they are in the habit of using themselves*, a position which rarely if ever bears the test of actual work. In suturing the abdominal wall, for example, there are three main methods, each of which is used exclusively by different surgeons because they have come to think that only one is a perfect plan; yet there have come recently under my notice examples of large ventral herniæ following the use of each of these methods, two examples being in the same patient. Many other instances could, if it were necessary, be quoted.

It is, I believe, safe to say that one of the most remarkable of psychological problems at the present time is the attitude of the public generally towards surgical operations, a problem offering difficulties in its solution second only to those presented by the mystery of radium, for whilst in the majority of instances the dread felt in connexion with the truly necessary operation is so great that it is, I believe, a factor to be reckoned with in deciding upon operations of this kind unless a successful result is practically certain, in cases of expediency and unnecessary operations it is often, unless my experience differs from that of other surgeons, extremely [illegible] altogether [illegible] question of [illegible] cede to a [illegible] r such a [illegible] Whatever the explanation may be there is no doubt that a heavy responsibility falls upon the surgeon in the matter, which is considerably increased by the fact that it indicates such absolute confidence in the integrity of the medical profession. The truth, I suppose, is that the public have an altogether exalted idea of what can really be effected by operation and have only the vaguest idea of what an operation really means. In respect to this attitude it cannot be too fully understood that no amount of anxiety on the part of the person to undergo an operation can absolve the surgeon of one atom of his responsibility in regard to its result—a point which, I fancy, is not always quite sufficiently considered.

A FORECAST AND CONCLUSION.

Nothing that I have already said must be held to mean that I under-estimate the value of operations as such, for no one has a higher appreciation of the immense benefit which is derivable from them and no one can be more ready, or, indeed, more anxious, to employ them in proper circumstances, but I admit that a feeling of apprehension arises in my mind when I regard the inclination which undoubtedly exists at present to consider the operative treatment as the alpha and omega of surgery, an attitude which must not only, as has already been said, end in the reduction of the surgeon to the grade of a mere mechanic, from which he is as far removed as a highly sentient human machine can be from an automaton, but distinctly, in my judgment, stands in the way of progress to better things. It behoves us, and it behoves us well, to bear in mind a fact to which allusion is less frequently made now than formerly—that operations, however perfect in themselves and in their results, are, excepting those rendered necessary by injury and in some cases of deformity and senile change, in truth a reproach to us as a profession, inasmuch as they afford clear evidence of our failure, even at the present time, to obviate the occurrence of the diseases and the conditions which render operation necessary. By allowing the influence of the operative treatment to be too great it seems to me that there is more and more danger of the great importance of preventive measures against disease being lost sight of. In fact, the conception and carrying out of a great operation are liable to conceal the importance of the initial defect which leads to the necessity for its performance. May I give a gross and commonplace example to illustrate clearly what I mean? Cancer of the tongue, setting aside any question as to what may be the factor in the origin of cancer itself, is undoubtedly set alight by one or more of the many irritations, most of them preventable, to which the organ is constantly exposed. But how much time and trouble are taken in preventing these local causes? In other words, how much thought is given to the preventive hygiene of the mouth compared with that which is expended upon the conception of elaborate operative measures for the removal of already existing cancer and upon a consideration of their effective application? The answer will be found to the question by a reference to the ordinary educational works on surgery. Cancer, tubercle, and the results of venereal disease, of which cancer is of course sometimes one, provide a very large proportion of cases requiring operations. The prevention of tubercle or its treatment in the early stages will before long, there is reason to believe, eliminate the necessity for its treatment by operation, and although we at present grope in the dark with regard to cancer, the discovery of the secret of its origin, which is only a matter of time and may come at any moment, perhaps from a least expected quarter, will assuredly lead to its treatment by other means than operation. With increasing sense in the community at large it is to be hoped that an antidote may be found to the sickly sentimentality which stands in the way of the practical extirpation of venereal disease. Apart from these considerations the means for the treatment of disease which tend to reduce the scope of mere operative measures are increasing. Of these the most potent is afforded *by certain of the higher physical* forces, which are slowly but surely encroaching upon the domain which has hitherto been subject solely to the rule of the surgeon. A comprehensive view of the matter generally as it stands justifies, I believe, a forecast that ere many decades have pa[illegible] know him will be a f[illegible] landscape than he now [illegible] restricted degree which I have mentioned, may be looked upon with as little favour as suppuration is regarded by us now. In the meantime, taking things as they are, it is well that we should beware lest a single predominant factor should be allowed to lead to our regarding through a small tube only a subject the horizon of which is absolutely unlimited. It has been said that the basis of surgery is handicraft, and this, *in a sense, is true*; but surely it is a truth only half told, for apart from the issues to which I have referred there is lying behind a far greater thing, the knowledge of when to apply that craftsmanship of which everyone who now aspires to the practice of surgery should make himself a master. Nothing that has happened in the improvements connected with the practice of our art justifies, so far as I know, the modification by one iota of the edict of the great surgeon who, before advancing science had robbed operations of most of their horror, said, "The all-important thing is not the skill with which you use the knife but the judgment with which you discern whether its employment is necessary or not." In other words, those who attach too much importance to mere mechanical dexterity not only fail to reach the high-water mark of greatness but entirely lose sight of the grand possibilities of their calling.

Gentlemen, I have done. Rousseau once said that people are happy in proportion first to their virtue and then to their independence. Being but poorly endowed with the former, such happiness as I have enjoyed has been mainly due to the latter. If, therefore, the spirit of independence has led me to express views to-night with which the feelings of any of those present are not in tune I must crave indulgence upon the ground that my intentions have at least been good.

A Lecture
ON
THE TONGUE IN DISEASE.[1]

Delivered at the Medical Graduates' College and Polyclinic on April 30th, 1903,

By W. HOWSHIP DICKINSON, M.D. Cantab., F.R.C.P. Lond.,

CONSULTING PHYSICIAN TO ST. GEORGE'S HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN; HONORARY FELLOW OF CAIUS COLLEGE, CAMBRIDGE; CORRESPONDING MEMBER OF THE ACADEMY OF MEDICINE OF NEW YORK.

Gentlemen,—The tongue is a remarkable organ, instructive in a double sense: it not only reveals the mind of man but also his health. As an index of health it may be said to be always truthful, whatever may be the case when it acts as an exponent of thought. My only concern at present is with regard to what we must take to be an accidental or secondary purpose of the tongue as a means of declaring the state of health of the person to whom it belongs.

The tongue has received attention in this respect from the time of Hippocrates until now. A vast amount of experience has accumulated with but little understanding, and until recently little attempt has been made to analyse its teachings or to reduce to their essentials the changes which it presents in disease not proper to itself. Many are the secrets which are incompletely revealed or imperfectly hidden upon its complicated but apparently simple surface. Upon this have been expended much vain imagination and some mischievous dogmatism and with it has been connected much empirical, but not always erroneous, practice. Mysterious sympathy has been supposed to exist between the tongue and the rest of the alimentary canal; as if by looking at one it were possible to discern the state of the other; as if it were the rule for the whole of this channel with its many differences of structure and purpose to share the same pathological state so that a small exposed portion could be taken as a fair sample of the whole. I can remember the time, and it is not quite past yet, when a white tongue was looked upon as a sure sign that "the stomach was out of order" and a dose of calomel or grey powder was inevitable. Such a simple rule is of the greatest service to the practitioner, for it enables him to display himself as a man of prompt discernment and ready execution. It is true that it is erroneous, consistent neither with sound pathology nor sound practice, but it is what may be called a working hypothesis, it points out something *to be done.*

Before a society of medical graduates it would be impertinence to describe the normal state of the tongue; suffice it to say that this is an average, not an absolute, condition and varies much in different individuals. The essential part of the tongue as an index of health is its voluminous and complicated epithelial clothing which may be superabundant, deficient, or partially absent; which may present many varieties of hypertrophy and atrophy; which may be moist or dry, conditions to which great importance attaches; which may expose its own surface however altered by disease, or may, particularly when the tongue is dry, show one which does not properly belong to it but is largely made up of vegetable growths and miscellaneous matters.

Of the morbid conditions of system, or at large, which bring about the alterations of the tongue which are significant of disease the most important is the absence or deficiency of saliva, for this must be regarded as a failure not limited to the salivary glands, but in all probability shared by other of the digestive juices. Boerhaave seems to have seen something of what was little noticed or little expressed by others—the importance of the saliva in relation to health and dryness of the tongue. "The saliva," he says, "continually flows into the mouth of a person in health and nothing is a surer sign to a physician of disease in a patient than his having a dry mouth." Ancient superstition attached mysterious virtues to the spittle.. Without giving it more credit than it deserves we may fairly attribute importance to it as one of the glandular products concerned in digestion which, if any harmony or common consent exist among them, may speak for others beside itself. It is the absence of saliva which, as a rule, occasions dryness of the tongue. Too much weight in this respect has been attached to breathing through the mouth during sleep and otherwise; dryness thus occasioned is incomplete and evanescent. Persistent and considerable dryness of the tongue implies, as a rule, want of saliva; it is this that gives to the dry tongue the clinical importance which belongs to it. The lack of saliva with the dry tongue is familiarly declared by the loss of the power of spitting; the patient has not the wherewithal. He may squeeze out with difficulty a drop or too of thick ill-coloured fluid, perhaps blood-stained, more mucus than anything else, but proper spittle has he none. The same want of saliva is declared by the results of catheterisation of the parotid duct. In health, if a suitable small tube be inserted into this duct where it opens into the mouth, and a little acetic acid be put upon the tongue, saliva will be seen to issue from the gland pretty freely. With the dry tongue little or none, probably none, can be got. Dryness of the tongue therefore indicates lack of saliva; if not in itself a vital deficiency probably a sign of one. I have made a great many observations to this end with the same conclusion—namely, that dryness of the tongue means suppression of saliva. In these observations I am glad to acknowledge the help which I received from my former house physician and present colleague, Dr. Cyril Ogle.

Dryness of the tongue, or in other words suppression of saliva, may, of course, be temporary and unimportant as when the tongue cleaves to the roof of the mouth from mental emotion, but when lasting it implies a grave constitutional failure. Absence of saliva not only produces the various phases of the dry tongue, to which I shall presently advert, but is connected with that very ominous variety of it where the epithelial protection is deficient, the tongue is red and bare, and raw beef a familiar comparison. The lingual epithelium is nourished, as we know, by the blood, not by the saliva; but there is reason to believe that the presence of saliva, by the moisture which it provides, is necessary to its proper growth.

Perhaps the constitutional influence next in importance as telling on the tongue is pyrexia or increased heat of body and breath. We are told by physiologists that cell growth increases with the temperature up to about 104° F. and that it diminishes as it passes this point. The overgrowth of epithelium thus occasioned is the chief, though not the only, agent in coating the tongue in recent and acute disease. Every degree of abnormal heat up to a certain point is indicated, at least in recent and acute disease, by abnormal proliferation and fur. We may regard the mouth as a hot-house for the cultivation of epithelium and the tongue as a thermometer on which every degree of extra heat, up to a certain point, is registered by the coat which it produces. The white tongue of acute febrile disease, which looks as if some white plaster, perhaps white lead, had been spread upon it with care so as to come up to, but not to encroach upon, the edges, is one of the most significant signs of disease which can be presented to the physician.

Another influence bearing on the tongue is a local and even mechanical one, want of friction, scour, and wash, which goes with failure in the process of eating and deficiency of saliva. The part played by want of wear and wash has been exaggerated until it has been presented as the most important of all the agencies which coat the tongue. It will be shown, however, that this plays but a secondary part. The coating of recent and acute disease consists essentially of elongated epithelium, not so much unworn as overgrown, to which adventitious matters add comparatively little. In some forms of chronic disease, however, when under great prostration and suppression of saliva, the mouth probably habitually open, food save in a liquid form impossible, and speech in abeyance, the tongue like old John of Gaunt's, "a stringless instrument"—in such circumstances a vast rubbish-heap may accumulate on this now useless organ consisting of vegetable growths, detached epithelium, débris of food, and accidental matters. This may form a dry crust of extraordinary bulk, not a part of the tongue but a super-addition to it. I have even known such a crust to break off and to look like a cinder, so dry and black and brittle was it.

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[1] I have dealt with this subject at more length in the Lumleian Lectures, published by Longmans in 1888, entitled "The Tongue as an Indication in Disease."

These influences, want of saliva, pyrexia, and disuse, to which may be added inflammatory or congestive states of the tongue itself such as occur with the strawberry-tongue of scarlet fever and some other conditions, are the chief immediate or direct causes which produce the states of tongue which we recognise as signs of disease. If we were to go behind these and to take account of the remote or indirect causes, the underlying agencies which coat, incrust, and denude the tongue, so numerous and so various should we find them that we should be at a loss to enumerate and to arrange. We should find among them a multitude of disorders, mostly febrile, where some special poison or constitutional infection, either home-made or of foreign manufacture, generally foreign, was recognised or presumed to exist. This would include the specific fevers and many other febrile states which are not so regarded. One obvious intermediary in these cases is pyrexia. There may be a poison in the blood, but this appears to act on the tongue rather indirectly, by way of pyrexia, suppression of saliva, and loss of appetite, than directly. The same intermediaries are concerned in producing the tongue of pneumonia and of other febrile conditions connected with acute inflammation. We should find also many conditions to which such terms are applied as "prostration," "vital failure," and "failure of nutrition," some connected with exhausting discharges and generally, but not invariably, associated with febrile action. All these bring complicated influences to bear upon the tongue—heat, disuse, and lack of saliva; but the greatest of these is lack of saliva.

With this preface I will proceed to sketch in bare and scanty outline the several changes in the tongue which may be called *symptomatic*—the results, that is, of diseases not proper to itself. I shall first refer to the changes in external appearance, taking these as the natural bases of classification. I shall then with the help of the microscope show something of the essential alterations upon which the obvious changes depend and before taking leave of each tongue I shall broadly indicate the constitutional conditions with which it is associated. This brings us to the clinical indications of the tongue, the practical importance of which can scarcely be over-rated. It may, indeed, be said with truth that in many phases of disease the tongue is more significant than anything else which the human economy exposes to view or presents in any way to our senses. It does not point out the site of the disease but it gives a shrewd hint as to its nature; it displays in a comprehensive sum-total its effects upon the system and shows at a glance what the most elaborate examination, otherwise directed, might fail to reveal. The tendency to death which, according to an old saying, it should be our endeavour to obviate may often be discerned by the state of the tongue, which may display upon its surface a request for support and stimulant none the less intelligible because inarticulate. *The tongue often shows at* a glance to the eye of experience whether the patient is approaching health or departing from it; whether he is getting well or going the other way; whether, in short, the coat is [illegible] diminish [illegible] stripping [illegible] whether [illegible] neither. [illegible] he tongue may be traced through successive steps of addition and subtraction. We may follow coat and crust to their maximum of accumulation and then become witnesses of the contrary process until the abnormal covering is removed, much of the normal covering swept away, and even structures beneath the epithelium in part exposed. The first stage of increase or investment, one but little removed from the state of health, is one to which such terms as

DOTTED OR STIPPLED

may be applied. This is characterised by a trifling excess of epithelium on the papillæ either from overgrowth or insufficient removal—not enough to cover the tongue continuously but to besprinkle it with white specks which in the language of small-pox are discrete, not confluent. We see in this condition the first departure from health or it may occur as a matter of personal peculiarity without any. So far as it is morbid it has more to do with disuse than with anything else. It does not bear witness to any constitutional disturbance but rather to its absence, though it may concur with any local disease which has not as yet gravely involved the system. It is necessarily of more serious import when dry than when moist. The average body-heat in 42 cases which displayed this tongue was 98 5°.

THE COATED OR LOADED TONGUE.

The next stage of acquirement is when the intervals between the papillæ are filled up and a continuous coat is presented. This is an exaggeration of the former state chiefly in superabundance of epithelium whether by way of putting too much on or taking too little off, or by both processes combined, as they so often are when pyrexia is associated with want of appetite. The pyrexia stimulates the growth of epithelium, the want of appetite reduces the wear. The white coated tongue, as yet moist, is too well known to need description. It succeeds upon the dotted tongue and is more or less mixed with it, the central part being continuously covered, the sides being only spotted. The intimate changes are chiefly epithelial excess. The processes of the papillæ are elongated; the epithelium of the intervals is superabundant and is probably reinforced by accidental matters. More or less "prostration," to use a somewhat indefinite term, was recognised in a considerable proportion of the instances in which the concomitants of this tongue were recorded and in many the saliva was noticeably deficient. Some degree of febrile action was testified to by an average temperature of 99·1° in 41 cases. Looking at the clinical adjuncts of the moist coated tongue I found that the manner of taking food was often concerned. In 26 of 41 cases the diet was wholly or chiefly liquid, not including two in which it was introduced by the rectum. Apart from diet this tongue concurred with a variety of conditions too numerous to mention where in general terms the patient was ill but not very ill. A [illegible] hich it is apt to occur would [illegible] humanity and many of the [illegible] f long continuance. Whatever raises the temperature, impairs the appetite, or restricts the salivary wash may give rise to this state of tongue to lead, it may be, to more ominous phases. I need not insist on what is almost obvious, that when the coated tongue is dry the indication is more grave than when it is moist and [illegible] 18 cases gave an [illegible] deserve especial mention, the "strawberry tongue" and what I have ventured to call the "plastered tongue." With the strawberry tongue injection underlies the coating through which the red papillæ project, *the converse of what holds with the fruit* where the white projections push through a coloured ground. The ideal strawberry state occurs with scarlet fever where the tongue appears to participate in the eruption; but lesser degrees of it are to be found in other febrile conditions. What I have called the "plastered tongue," which looks as if white lead or some less vividly white and coarser grained material, more like mortar, had been carefully spread upon it, abruptly ceasing at the edges, is the acute coated tongue or the coated tongue of acute disease. The coat is more white and more sharply defined and the substratum is more red than with the coated tongue of trivial or chronic disease. The fresh look of the coat betokens recency and its abundance the activity of the process which has produced so much in so short a time; in other words, the acuteness of the disease with which it is associated. The minute anatomy of the plastered tongue is that of the common coated tongue, only more so. The elongation of the papillæ is greater; there are more filling up of the intervals and more accumulation upon the summits of miscellaneous matters—epithelial, parasitic, and accidental. There is no tongue more instructive and distinctive. The first glance gives the alarm and suggests pneumonia or typhoid fever in the first place, then acute bronchitis or acute rheumatism. Nor are other acute febrile disorders to be ignored, though less to the front than those which have been mentioned. The average temperature of 27 persons presenting this tongue was found to be 101·6°.

Turning from the acute coated tongue, the most definite in its indications of all the tongues we know of, we come to one which is less distinctive, more often chronic than acute, signifying disuse more than anything else. This may be called

THE FURRED OR SHAGGY TONGUE

and is charcterised by the preposterous length of the papillæ suggestive of coarse and matted fur. The word "fur" is used in two senses—there is the fur of a beast and the fur of a tea-kettle; the one presents a series of points, the other a level surface. The word has been applied to the tongue in both senses, perhaps the more often as implying a smooth coat. I have, to avoid confusion, restricted it to the animal usage—beset with points. The elongation of the papillæ is evident to the naked eye and during life. They are often tipped with brown and more or less obscured by incrustation and may present irregular pointed masses. I have seen in a case of cancer of the larynx much of the hinder region covered with a villous production like coarse hair, no part of the cancer, but only an exaggeration of the natural structure condemned to disuse. Under the microscope the chief change is elongation of the filiform papillæ, more especially of their extremities, which in a microscopic sense may be termed horny, yellow, and rejective of carmine. The circumstances of this tongue are for the most part restriction of diet and want of wear and of saliva. Of 29 cases where this variety of tongue was noted were 21 where ordinary food was absent or restricted, 17 were on liquid diet, three were on dry diet, and one was on rectal diet. Except with diet this tongue has no special association, though some degree of pyrexia is usually present and helps to stimulate the growth of the papillæ. 22 cases of the furred and dry tongue gave an average temperature of 99·1°. This tongue is usually dry and when so promises ill. It occurs more often with chronic disease than acute, though I have noted among its associates pneumonia, typhoid fever, and acute rheumatism. It generally tells of long illness (for the exaggeration of the papillæ is a slow process) of such a sort as to restrain the saliva and to inhibit solid food.

Succeeding upon the plastered and furred tongue comes that which is

INCRUSTED, BROWN, AND DRY.

The elongated papillæ are there but they are separated and caked over with a brittle crust, variously cracked and fissured, which largely consists of vegetable organisms, oidium albicans and micrococci, together with detached epithelium and extraneous and miscellaneous matters. This is the climax of acquisition. It tells of long exemption from wear and wash, of absence of mastication, suppression of saliva, and generally, though not necessarily, the presence of a high temperature. This is the tongue of the "typhoid state," though by no means limited to typhoid fever. It is of grave prognosis and calls for liquid nourishment, of which alcohol forms a part. This is the tongue of long-continued prostration or failing vitality; the essential factor is long suppression of saliva; pyrexia is generally present, though not necessarily so, since it is possible that the tongue may be dry and incrusted, though the temperature is subnormal. Typhus and typhoid fever, pneumonia, and pyæmia are frequent concomitants. To name all the conditions with which it may concur would be to include many, perhaps most, depressing and exhausting diseases, especially such as are nearing their fatal close. A dry mouth, failure of the salivary and probably of other glands essential to nutrition, the absence of the power of taking other than liquid food, and probably withal a febrile temperature—these are implied by the incrusted tongue and together are of evil omen. The average temperature of 21 cases of this tongue was 100·3°.

Having traced the coating of the tongue through its various stages up to its maximum in a cindery addition, perhaps an eighth of an inch thick, we now come to the contrary process, that of denudation, which ends in the tongue which is

RED, SMOOTH, AND DRY.

This, naked, bare, and raw-looking, so as to be likened in common parlance to beef-steak, is produced in this wise. After the continuance of some wasting or depressing disease, often attended with exhausting discharge, it may be of pus, the lingual epithelium fails to grow properly; the upper layer disappears and the deeper is laid bare; or even in parts the whole epithelial thickness may go leaving the deeper structures exposed to the irritating contents of the mouth. Connected with the general exhaustion or depression is the consequent deficiency of saliva which when long continued seems to impair the nutrition of the epithelium—not that the epithelium is fed by the saliva, but it needs to be kept moist to profit by its opportunities. The denudation may succeed by a gradual process upon health, as this gives way to disease, or it may ensue upon the incrusted tongue, the crust breaking off or wearing away. The upper layers are often swept away down to the Malpighian, or this may go too, laying bare the corium which becomes injected and charged with leucocytes. Often a process of repair may be discerned. The deep remains of the epithelial layer, the papillary prominences being swept away and the tongue levelled, now become clothed with a delicate translucent membrane of uniform thickness, barely evident except with the microscope, which scarcely interferes with the raw beef appearance. This membrane refuses carmine and is apparently representative of the superficial epithelium which normally tips the papillæ.

Like the incrusted tongue, that which is raw and red is associated with pyrexia as a general though not an invariable accompaniment and with deficiency of saliva probably as an invariable one. But there must be other and special circumstances which determine that the tongue shall be denuded rather than incrusted or furred. It appears, in the first place, that the denuded tongue represents a later phase of disease than the coated or incrusted, for it often succeeds upon these and takes longer to make. To what extent want of saliva alone is able to make bare the tongue may be doubted. The circumstances in which it becomes so suggest that though suppression of saliva may be contributory, some special cause of exhaustion, often by discharge, is also contributory.[2] I have elsewhere quoted a case in which after a nervous shock the saliva was permanently suppressed and the tongue became not only dry but red and bare. It is possible that there may have been more in this case than we know of. At any rate, it is clear that exhaustion by discharge plays a large part in the impairment of nutrition which this tongue represents. Among 30 cases in which it was observed were five of diabetes, four of phthisis or other forms of tuberculosis, two of lardaceous disease, two of dysentery and abscess of the liver, and four of purulent discharge in some other shape—17 in all in which a morbid flux concurred with the tongue under consideration. The most vivid example of this tongue which I ever chanced to light upon was in a case of dysentery with unopened hepatic abscess. Pyrexia does not range so high as with some of the preceding types of tongue, giving for 29 cases an average of 99·6°. The diseases with which it is associated are mostly subacute and the fever is often hectic. Thus, the clinical significance of the red bare tongue is clear enough: prostration of some standing, often connected with material exhaustion, and apt to be attended with febrile action of the hectic type. The salivary secretion is deficient though not so much so as with dry incrustation. Physiologically the essential factor is failure in the growth of the lingual epithelium, apparently due to a concurrence of causes rather than to one alone. Whether apart from its action by way of the saliva the constitutional depression has any direct effect in inhibiting epithelial growth must be asked—it looks as if it had. All the processes of nutrition must be supposed to suffer where there is a cause of exhaustion which acts on the whole body, but if the denudation of the tongue is wholly due to this cause nowhere else is the impairment shown so conspicuously as in the lingual epithelium.

Of this organ I have now traced the morbid covering from mere dotting of the papillæ to its climax in mountainous accumulation and have then followed the reverse process by which the tongue has been stripped of its coat and even of its skin. I have pointed to some, perhaps the chief, of the agencies at work in bringing about these changes: the abeyance of food and friction, the deficiency or absence of saliva, and the association of pyrexia with overgrowth of epithelium, and of some forms of exhaustion with its falling away. I have shown that the tongue, whatever else it may be, is a constitutional index or systemic gauge which comprehends much and reveals much, and is especially in touch with conditions of fever. It does not point out the locality of disease but it shows its general effects, often hints at its nature, and offers some broad hints as to its treatment. Nor must I omit to recall what I have already hinted at—the prognostic value of the organ in question. If "old experience doth attain to something like prophetic strain," it is often by means of the tongue that this gift is manifested. Invaluable is the quick assurance in a case of acute disease that the patient is on the road to recovery which is imparted by the first glance which shows the coat to be withdrawing regularly round the edges, exposing a wet and healthy surface. If the tongue is on the mend so must be the man. Quite otherwise is the prospect afforded by an irregular breaking away of the coat, giving to view a substratum which is red and wanting in moisture.

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[2] The Tongue as an Indication of Disease, Dickinson, p. 83.

I cannot flatter myself that what I have this day put forward, drawn partly from the common stock of medical knowledge and partly from my own observation, is anything more than a very imperfect attempt to connect the morbid [illegible] with the disturbances of health [illegible] Though the subject in some of [illegible] most ancient in medicine, yet in others it dates no further back than the microscope and thermometer and in all but what is empirical is in a provisional stage. But if we do not know all we know enough to be sure that the value of the tongue in clinical medicine deserves a fuller exposition than it has this day received and a more able exponent.

An Address

ON

THE DISPOSAL OF THE WOUNDED IN NAVAL WARFARE.

Delivered at the Royal United Service Institution, Whitehall, on May 12th, 1903,

By PHILIP N. RANDALL, M.B. LOND.,

LATE SURGEON, R N.

GENTLEMEN,—Naval medical officers view with foreboding and dismay the prospect of being called upon to deal with a large number of serious injuries in such situations and under such conditions as are unsuited for such purposes. The sick-berth of the present day in the navy has gained light and air but the situation selected for it in all modern ships is thoroughly recognised to be one which would be absolutely untenable in actual warfare. The period of convalescence is one which at all times calls for constant and anxious attention but more particularly after major operations performed upon those who at the time of their injury sustained in consequence a profound shock to the whole system. Shock, *per se*, adds greatly to the difficulties present and the dangers to be apprehended in every case. There must be a provision of such prime hygienic necessities as space, light, fresh air, warmth, comfort, and complete freedom from all septic dangers. In considering the means at present existing in ships for the accommodation of the wounded the first point which seems most naturally to offer itself for attention is the position and capacity of the sick-bay provided in each ship, seeing that this is the only place in the ship devoted to, arranged, and fitted out for the work of the medical staff. However, in all modern ships it has been found necessary to seek for a cock-pit for use in action, and a site is officially selected for such use. It is this place, therefore, that must needs be considered and not the sick-berth. A return to the cock-pit principle has been decided upon officially for some time past but beyond the selection of a site nothing further has been done to make the place selected in any way fit for its important duties except the provision of an operating-table. The question of the accessibility of the cock-pit from the fighting decks raises a practical difficulty which has always been present and has become increasingly harder to compass in each new type. The features that so complicate the matter are due to the introduction and the more and more extensive use of water-tight compartments with a corresponding increase in the number of the divisions and subdivisions of a ship by means of watertight bulkheads. The use of armoured decks introduces a still further interposition of difficulties. When the ship is cleared for action every opening in all these transverse, longitudinal, and horizontal partitions is necessarily closed up, only such as form the means of communication between the magazines and the fighting stations being left open. Conveying the wounded to a dressing station improvised below the armoured deck has therefore become a matter of considerable difficulty, for the choice of position for such work is not only limited by special needs as to size of aperture necessary but also by the finding of a hatch that can possibly be used for the purpose. A torpedo hatch is usually selected as having sufficient size and probable freedom from other uses. When the wounded have been brought down through a hatch to the flats, there still remains the necessity of finding a suitable place for their bestowing; but whether it be the barbette flats, the wing passages, or the bathrooms for the engine-room ratings, the same serious objections apply to all. In not one of them is there any supply of air or light, other than by artificial means. The boilers and engine-rooms are in close proximity, keeping the places at a high temperature and rendering the air close and stuffy even under the ordinary conditions of cruising when all the boilers are not in use and every possible opening is kept free. Tightly closed down in action, with all the boilers alight, would mean a very considerable aggravation of already objectionable conditions It might, perhaps, be possible to accommodate about 40 cases in these flats but to do so they must be laid on the deck and packed closely together.

The next point to be considered is the state of things that would actually obtain and have to be dealt with during and after an action. In other words it is necessary to determine as approximately as possible the number of wounded *that would have to be dealt with as the result of* an engagement. There are strong grounds for the belief that, in an action in which there are highly trained and [illegible] side, the number of [illegible] that obtaining in the [illegible] now be concentrated upon the hulls and not upon masts and sails, which latter were the primary object of our former foes. A working average of 7 per cent. of the complement, as the number of wounded to be expected in each ship in action, cannot be said to err on the score of exaggeration, but must rather be looked upon as the irreducible minimum. If that figure be taken as a working average, and applied to battleships, &c., now composing our main fleets, and certain to be actively engaged in a naval war, an approximate number may be obtained of the wounded that would have to be treated in each ship that emerged from the contest. At the same time it must be borne in mind that this approximation may only represent a third, or even a fourth, of what might actually occur. The total wounded for the Mediterranean fleet would be 1112, the total wounded from the Channel and Reserve F[illegible] the China Fl[illegible] at an estim[illegible] be expected the condition of the ship itself after an action may be considered. The unarmoured parts would be completely riddled by every sort of projectile, shot, shell, and bullet, so that the internal arrangements of those parts would be in a state of complete and thorough disorganisation, due not only to the wreckage and destruction wrought by the explosion of shell but also to the consequent outbreaks of fire; as regards the armoured parts of the ship it is at least doubtful whether the best protection yet devised would remain intact, so that at any rate there can be no doubt about what would happen to parts where there was a less amount of protection by armour, whether in thickness or in quality of face. It is, in fact, laid down by more than one authority that, to escape as much as possible [illegible] shell, it is better [illegible] easily pierceable [illegible] would therefore be found within the armoured parts as without, though maybe not to the same degree of destruction. We are now able to consider how far the means at present provided would go to meet the demands that would actually be made upon them. It will enable matters to be seen more clearly if the facts, as established, are actually applied to a ship like the *Majestic*, as fairly representing the modern type of battle ship. The *Majestic* has a complement of 757.

The cock-pit would be established in the lower deck flats, below the armoured deck and inside the protected part of the ship. Either the barbette flats, the wash-places, or the ammunition passages would be selected. The sole means of communication between such places and the fighting decks would be devious and difficult; the only provision of light would be by artificial means and probably only by candles; while all means of ventilation would be cut off by the closing of the armoured deck and the many bulkheads that exist. This last measure would be a vital necessity for the ship, but would make many times worse an atmosphere which under ordinary conditions is close, mephitic, and kept at a high temperature by the proximity of the boilers, all of which are in use. The vitiation of the atmosphere of a closed space increases rapidly with each expiration from the lungs made by every person present therein and each addition to the number of persons adds to the foul and poisonous condition. The number of wounded to be expected, according to the average, would not be less than 53. When the ship emerges from action with her unarmoured ends completely wrecked and disorganised, with her armoured parts in a somewhat similar condition, with numerous shot holes and rents in her sides allowing seas to wash in freely so that the decks and flats about the level of the water-line would be flooded with water, with, perchance, injuries from ramming or torpedo which by alteration of stability or damages to engines and other vital parts would only add to the general confusion, and with lighting and ventilating arrangements probably altogether unworkable and completely broken down, how and where, it may be asked, will it be possible to find a place wherein at least 53 men with, in the majority of instances, severe wounds can receive in even the least degree that immediate care and attention, and especially the fitting after-treatment, which are necessary to save their lives? The attempt to accomodate them in the flats could, and would, only mean a return to the disastrous effects of earlier days. The teaching of former experience has been writ large in naval, military, and civil practice, and the meaning of the writing on the wall cannot nowadays be possibly misunderstood or misconstrued. Consequences of terribly fatal effect would most certainly be entailed if, and whenever, 50 men—or for that matter half a dozen men—were closely packed together on the wet deck of a heated, stuffy place, never visited by daylight, having no natural supply of pure air, and with the artificial supply of both most probably cut off. They would have to breathe an atmosphere thickly charged with respiratory products and human emanations. The blood about the deck, the clothing, the bedding, and dressings would speedily become putrescent, and there would soon be poured forth from the large wounds a vast amount of putrescible discharge. In a medium so favourable to the production and rapid growth of many kinds of infective bacteria, erysipelas, tetanus, hospital gangrene, and all the fell products of septic infection would inevitably be developed, while all means would be powerless to avert their ravages and they would deal death far and wide among all cases of wounds, whether these were of large or insignificant dimensions.

Demonstration has now been made that the number of wounded would be large in every ship actively engaged; that the accommodation at present provided in ships would be insufficient for even a fourth of the number that might be expected; that this accommodation, being in the unarmoured part of the ship, would be impracticable for use during action; that it would be absolutely unfit for any use whatever afterwards; that it would be impossible to obtain elsewhere in the ship adequate and proper accommodation for the wounded; that the suggested cock-pits are in no wise suitable in size or in general conditions; that the use of so insanitary a place would infallibly bring about outbreaks of septic diseases of the most virulent kind; that no means of transport would be found on board available for use after action; and that the only hospitals large enough to receive the numbers consequent on a fleet action are at Portsmouth and Plymouth. The evidence thus adduced and set forth can lead, after careful consideration, to but one conclusion—that in the fighting line afloat, as in the case in that ashore, all treatment of the wounded beyond "first aid" would be impracticable, and further, that after-treatment on board would, in justice to the wounded, be a practical impossibility. There is, however, an obvious way out of the *impasse*, which is the adoption of the principle of hospital ships for fleets, thus ensuring the saving of many lives which would otherwise be certainly wasted. Every fleet of battleships should therefore have attached to it one or more ships entirely devoted to, and specially fitted out for, hospital duties, flying the Geneva Cross, and complying in all respects with the terms of the Geneva Convention and those of the Hague Conference. These fleet hospitals would cruise with the fleets, and, having first received all cases of serious illness from the ships, would accompany them to the verge of safety when they went into action. Each hospital ship should be provided with as many large and roomy boats as could possibly be carried. By means of these boats endeavours could be made to maintain close communication with the fighting line, seizing upon every opportunity that offered, such as a ship hauling out of action, to collect and to transfer to the hospital ship as many wounded as possible. This may or may not be practicable, but the main use will be when the action is over. The hospitals would then close with the fleet and their boats would bring away all the wounded from every ship in the fleet. By these means the ships of the line would be freed from the encumbrance and hampering due to the presence of wounded on board and would be left with crews necessarily diminished in numbers but composed of those fit and able to devote their whole attention to their own proper duties. The benefits accruing to the wounded would be incalculable, for once received on board the hospital ship their treatment could be carried out each and every case in proper detail and according to needs, quite free from difficulties which otherwise would be overwhelming. At the same time excellent conditions for the due and proper after-treatment of the cases would be completely insured. The movements of the hospital ship subsequently to the action would necessarily be governed by circumstances, but whether despatched to the nearest available hospital or remaining at sea with the fleet those on board would be under conditions offering the best means of recovery and vastly different to a labouring and probably long-drawn-out voyage in a much damaged battle-ship possibly unable to effect more than a few knots of speed.

Under these conditions the services of the medical staff would have to be disposed in three ways—in the fighting line, in the collecting boats, and in the hospital ships. In the fighting line only "first aid" should be rendered to the wounded and for this purpose dressing stations should be established where possible and convenient. One medical officer in each ship would be sufficient for the supervision of that work and his sick-berth staff should be reinforced by the chaplain and accountant staff, for all of whom thorough instruction and examination in those duties should be made compulsory. The medical officer and his staff of assistants must be free to move about the ship as expeditiously as they can and to go wherever they are most urgently needed, as, for instance, to a case-mate wrecked by a shell. A central dressing station would naturally be of the greatest assistance but it must be regretfully admitted that very little can be hoped for in this direction in view of the very complicated arrangements of modern ships of war. The introduction and general use of case-mates for the guns of the secondary battery suggest that these might in some way act as a screen for dressing stations established in rear of them. The deck would be clear, communication would be easy, and the wounded would be most conveniently placed for removal to boats whenever a suitable opportunity presented itself. The difficulty of conveying the wounded would thus be completely avoided and there would be a great gain in promptitude of attention by the medical staff. The collecting boats should be steamboats of good and handy sea qualities, as large and roomy as possible, and accommodating six or eight cases. They must be manned by crews well skilled in boat work, as well as in the hoisting in and out of cot cases. Not less than 12 of these boats should be carried by each hospital ship.

The type of ship most appropriate for the purpose of a hospital ship is one on the general plan of a modern mail steamer of the best class, of good size, and capable of maintaining a continuous sea speed of not less than from 18 to 20 knots so as to keep station with a modern fleet proceeding at full speed. The wards should occupy the centre and forward parts of the ship, where nowadays is placed the first-class accommodation in mail steamers, thus insuring a liberal supply of fresh air, light, and deck space. It would be well to limit the accommodation of each ship to 500 cases, so as not to involve too large a staff and consequent difficulties in finding sufficient room for their due requirements and convenience. The ships should be specially built for the purpose and not adapted from existing mail steamers, so as to insure complete protection from septic dangers *Mutatis mutandis*, all the details, large and minute, now introduced into modern hospitals with the object of limiting as far as possible resting places for dirt of every description should be carried out in the ships so as to obtain damp- and germ-proof floors, walls, and fittings throughout In a word, the hospital afloat must be built in every respect in accordance with the principles adopted in the hospital ashore and must be as perfectly self contained in every respect

With a ship thus equipped for the purposes of active service, and by strict attention to all other details besides those briefly alluded to which insure complete asepsis, it will be possible to remove completely the stigma which formerly attached to hospital ships which had been used in connexion with military operations from a sea board base The wounded would be able to do as well as if treated in well appointed hospitals on shore, moreover, they would not be taking up room which, if found, could be ill-spared and would be wholly unsuitable, they would not be in the midst of extremely insanitary conditions which would cause them great distress and be of actual deadly effect, they would no longer be exposed in a helpless and hopeless *position to fresh wounds in any further action*, but they would have every possible means known to modern science afforded them of remaining to prove of further use to themselves and to their country A profitable use could be found for such ships in time of peace Part of the year could be devoted to cruising with their respective fleets, carrying out manœuvres which should embrace all the details for active service, thereby insuring proper training and efficiency For the remainder of the year they could be used for the conveyance home of invalids only from India and other foreign stations at the cost and charges of the respective military authorities A special service in this respect would be a great boon to all concerned and has long been needed

THE SURGICAL TREATMENT OF PULMONARY HYDATIDS

By JOHN O'CONOR, M A, M D T C D,
SENIOR MEDICAL OFFICER BRITISH HOSPITAL BUENOS AYRES

As little or no mention is made in English text books as to the prevalence of hydatid disease in the Argentine I should like to draw attention to the frequency of the affection there, for I think that if reliable statistics could be procured in all probability it would rank as second to Australia in this respect During the past eight years I have operated on 84 cases, 56 of which were hepatic and only three pulmonary Obviously the experience derived from a few cases affords little material for conclusions, yet as hydatid of the lung is comparatively rare possibly the notes of my cases and the details of treatment may be of some interest.

I cannot help thinking that two of my patients would have succumbed if operative treatment had not been adopted, and in making this statement I am cognisant of a recent contribution by M Dieulafoy in which he arrived at this somewhat disconcerting conclusion "The treatment is more or less expectant, being directed towards the control of the hæmoptysis, surgical intervention can seldom be of much use, for when the cyst empties itself there is no need to interfere and in other cases their localisation may be too difficult to warrant exploration" By way of comparison the following extract from Mr Stephen Paget's work on "The Surgery of the Chest" is most interesting "It is plain that the mortality of hydatid disease of the lung left to itself is somewhere between 50 and 60 per cent, to say nothing of the years of illness which some of these patients undergo Statistics of operation are in strong contrast with those of non interference In 1885 Thomas collected 32 cases of hydatid of lung treated by free incision with no less than 25 recoveries—he puts the mortality left to itself at 54 per cent

The rupture of the cyst into a bronchus may of itself be a frightful ordeal even if it does not end in death" Con

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The important primary points connected with a case of this sort are diagnosis and localisation The former may be attended with much difficulty, for if the cyst has not ruptured into a bronchus microscopical examination of the sputum, which is our one positive diagnostic resort, affords only negative information In such instances the family and personal history of the patient have carefully to be considered and also the locality in which he has resided for previous years, *as in countries where hydatid disease* is common one has always to eliminate the echinococcus before definitely deciding as to the nature of any tumour The unilateral situation of the affection with probably a sharply defined dull area not corresponding to the usual site of a pleural effusion or hepatic enlargement, taken in conjunction with diminished breath sounds, vocal and tactile fremitus, with antecedent evidence of an irritating hacking cough with bronchitic sputum, may reasonably excite one's suspicion

If rupture of the cyst has occurred the symptoms may be altogether different There is usually the history of a sudden evacuation of a quantity of fluid, followed by frequent, and at times considerable, hæmoptysis—a complication which not only seriously aggravates the condition of affairs but also affords evidence that a communication exists through which air can pass into the cyst cavity, the result being *that* the *latter* becomes gradually converted into an

diagnosis in this phase would be almost impossible if it were not for the fact that microscopical examination of the sputum now affords positive evidence—viz., hooklets and bits of necrotic chitinous material The latter may be often detected without the aid of a microscope and are commonly described as pieces of "gooseberry skin"

It may be expedient to remember that the absence of any of the usual symptoms does not negative the presence of a cyst, for diminution of breath sounds and existence of dulness are to a great extent determined by the amount of lung tissue which intervenes between cyst and chest wall and *it is obvious that there must be a period in the development* of all "intra" pulmonary hydatids in which physical examination would not reveal anything abnormal And it is only when the cyst assumes such proportions as to cause irritation of the lung that the first symptoms, dull pain and cough, supervene So much have I been impressed with these subjective symptoms as being indicative of hydatid that I usually assume the presence of hydatids on hearing a healthy looking camp man complain of a pain over the right hypochondrium (liver) or of a hacking cough with or without pain in the chest If physical examination does not afford a clue I usually adopt a waiting policy and advise the patient to return to work and to report himself periodically if things do not improve Quite a number of these patients return in from six months to two years with a "full blown" cyst As hydatid disease is fortunately a lazy one I think we *may profit* by the fact and adopt the business man's tactics, await instructions, which in this instance signify a few physical signs which ordinarily denote the existence of disease But, as I mentioned above, it is impossible to diagnose with certainty a case of pulmonary hydatid in which rupture into a bronchus has not occurred, even admitting the existence of well defined dulness, diminished expansion, &c., consequently if we suspect hydatid and are prepared to deal with it surgically I see no help for it but to fall back on some exploratory device

Personally I do not much fancy opening the chest on an exploratory mission, for not only does thoracotomy in itself entail risk to the patient but it by no means follows that such an opening would correspond to the most suitable point at which to attack the cyst, moreover, it must be remembered that in many cases the capsule may not be evident even when the lung is exposed (*vide* my cases) Consequently I not only recommend the employment of the exploratory syringe and needle as a diagnostic agent but as a valuable aid to localisation, by the information thus derived we are enabled to plan our incision so as to correspond with the most superficial portion of the cyst and so avoid unnecessary interference with lung tissue While advocating the use of the needle I ought to mention that in two hepatic cases rather alarming transitory toxæmia followed an exploratory puncture, I now make it a rule to perform such exploration under anæsthesia on the operating table and immediately to back up the needle by a scalpel if hydatid fluid is struck. By this means I think that any danger attending the escape of hydatid material into a serous cavity may be practically eliminated.

As I do not know of any operation in which it is more necessary to commence with a definite plan of campaign I may be pardoned if I enter rather fully into detail. Chloroform having been administered, the patient is placed in the supine position, with the affected side well overlapping the edge of the operating-table and two assistants are deputed to maintain this position throughout. On removal of the perchloride lint dressing an assistant washes the whole side of the chest with alcoholic acid mercurial solution (1 in 1000). An exploring needle is next inserted into the suspected area and if fluid enters into the syringe the latter is detached and the needle is utilised as a sound to locate the most superficial portion of the cyst. Once this point is decided on the needle is withdrawn and a four-inch incision is made parallel to the corresponding ribs, a few inches of the latter are resected, the pleura is opened and the presenting lung is instantly secured by two good bullet forceps and rapidly drawn into the wound. By this manœuvre the confusing storm consequent on a collapsed lung is obviated and blood and hydatid fluid are later prevented from dropping into the pleural chasm and setting up a septic pleuritis which not infrequently proves fatal. The bullet forceps are then handed to an assistant whose sole duty it is to take care that this extemporised cork does not slip back. The exploring needle is again inserted and if fluid appears in the syringe the latter is removed and the needle is left *in situ* so as to act as a guide for the knife which is now entered alongside it. The intervening lung tissue is incised and the cut edges are seized by forceps and everted. The knife is then pushed into the cyst and as the fluid escapes the exploring needle is withdrawn and the left index finger is introduced along the blade of the knife into the cyst; the latter is in turn removed, two sharp hooks are inserted alongside the finger, and by this means the cyst wall is secured and drawn outwards. With a large full-curved needle some half a dozen silkworm gut sutures are applied so as to include the cut edges of the fibro-cyst with some pulmonary tissue and passed outwards through the intercostal muscles and the skin and just as they are being tied the assistant removes the bullet forceps so that the extruding portion of lung may recede. With this the operation is practically concluded; the endocyst is removed by gentle application of a long forceps, a large rubber drain is inserted, and iodoform gauze is applied to the wound.

The after-treatment is most tedious as there is a great tendency to the formation of a flask-shaped cavity—viz., closure of the external wound before the cavity in the lung is obliterated. I have frequently observed the same in hepatic cases and on six occasions I have been compelled to make an intercostal counter-opening subsequently to cœlio-hepatotomy.

There are some who, notwithstanding the experience derived from Bond's operation in liver cysts, still advocate removal of the contents of the fibro-cyst and closure of the external wound without drainage. In suppurative cases such treatment would be obviously inane and even in non-suppurative cases, considering that the fibrous sac has to be got rid of somehow, I cannot see any reason for not availing ourselves of a ready exit without taxing nature with its absorption, not to mention the possibility of the cavity becoming septic after operation. I tried Bond's method once in a case of simple hydatid of the liver and 14 days later I had to re-open the abdomen in order to clear out a large quantity of pus; fortunately, adhesions had formed between the cyst and the parietal peritoneum or the result most probably would have been disastrous.

CASE 1.—A man, aged 51 years, was sent into the British Hospital, Buenos Ayres, on Dec 24th, 1896, by my friend, Dr. L. Colborne. About 12 months before admission he first complained of a dull pain in the right chest, which was soon followed by an irritating cough with a small quantity of clear sputum. Three months previously he had suddenly coughed up a large quantity of blood-stained liquid; severe attacks of hæmoptysis ensued, accompanied by nocturnal fever, sweating, shivering, and loss of flesh. There was nothing in the personal or family history which threw any light on the subject. Physical examination revealed absence of respiratory movement on the right side, with marked dulness over the anterior and lateral portions; respiratory sounds were absent and vocal and tactile fremitus were considerably diminished. On the evening of his admission into the hospital his temperature was 102° F., his pulse was 110, and his respirations were 35, and he was continually coughing up blood. The existence of a resonant patch beneath the angle of the scapula, with free entry of air, struck us as somewhat suspicious, so an exploring needle was inserted and some clear watery fluid appeared in the syringe (it contained hooklets). On the following day chloroform was administered and, assisted by Dr. Colborne, I excised three inches of the fourth rib in the anterior axillary line. Lung tissue presented and had to be incised for one inch in depth before we encountered a large cyst which contained nearly two pints of clear fluid, about eight ounces of pus, and a necrotic endocyst. The operation as described above was carried out and the patient was discharged cured on Jan. 22nd, 1897.

CASE 2.—A youth, aged 18 years, entered the hospital on May 4th, 1901, with the diagnosis of hydatid of the lung. In April, 1900, he first complained of getting out of breath on slight exertion and a few months later a troublesome cough supervened, with abundant frothy expectoration. He gradually lost flesh and occasionally felt feverish, and as physical signs of some lung affection became obvious in November his medical attendant determined to explore. Curious to relate, while the syringe and needle were being disinfected in the patient's bedroom he was seized with a severe paroxysm of coughing and brought up about "two litres" of "water." This seemed to relieve matters for a time. In January, 1901, the cough became very persistent, with frequent hemoptysis; fever, sweating, chills, and loss of appetite became intensified and in February he coughed up "bits of skin." On his admission into the hospital physical examination of the right chest revealed diminished expansion and marked dulness from the third rib downwards in the nipple and axillary lines and abundant bronchial râles, with some moist sounds, were elicited on auscultation over the dull area. Posteriorly the percussion note was modified and some vesicular breathing was heard in the scapular line. Tactile and vocal fremitus were increased over the affected area The evening temperature was 101° F., the pulse was 90, and the respirations were 32. During examination he coughed up two pieces of cyst. Operation was performed on May 10th. Half an inch of lung tissue intervened between the chest wall and the cyst which was attacked through an incision over the fourth rib in the anterior axillary line. About a pint of pus and a gangrenous endocyst were removed. A most protracted and tedious convalescence ensued, the wound discharged for months, and he could not be sent out as cured until August 19th.

CASE 3.—A boy, aged six years, was admitted into the hospital on Oct. 9th, 1900, with the following history. His mother stated that in April "he caught a severe cold" and a short dry cough remained which, in spite of a month's sojourn on the Cordoba Hills, had continued up to the date of his admission. After some time it was noticed that he was getting thinner and losing his appetite and a nocturnal rise of temperature was noted without any sweating or shivering. On the morning of his admission the temperature was 101·6° F., the pulse was 120, and the respirations were 40. The patient appeared to be somewhat emaciated; he had flushed cheeks, dry and hot skin, and a furred tongue. On examination of the chest there was distinct subclavicular flattening with diminished expansion over the right apex, resonance was deficient anteriorly and posteriorly, tactile fremitus was decreased, and there were harsh tubular breathing and twanging voice sounds. The breath sounds were normal over the rest of the lung. There was no history of tuberculosis in the family but an elder brother had suffered from hydatid of the liver. The evening temperature reached 103·6° F. There was a most troublesome cough with a little bronchitic sputum. On Oct. 11th chloroform was administered and a needle was inserted into the second space in the nipple line and some purulent fluid was withdrawn. Judging from the depth at which fluid was struck it was evident that the cyst was situated in the posterior portion of the apex. An incision three inches in length was made parallel to the second rib commencing in the mid-axillary line and extending backwards to the margin of the scapula. A few inches of rib were excised and owing to adhesions with the posterior wall it was found impossible to draw the lung into the wound, the lung collapsed, considerable shock immediately ensued, and to make matters worse six punctures with the exploring needle failed to locate the cyst. The anæsthetist at this stage of the procedure mentioned that "things are looking blue" and as there was no time to lose I pushed a knife upwards and backwards into the adherent apex and the sense of relief can be better imagined than described when I saw fluid flowing out along the blade of the knife. A forceps was inserted alongside the latter and the opening was dilated so as to admit a finger, which detected a small collapsed cyst with only a few tablespoonfuls of pus. The cyst was removed and a large rubber drain was inserted into the cavity and another into the depth of the pleural chasm The child's condition continued most grave for two days but youth, warm nutrient enemas, and strychnine saved the situation and after a sharp attack of purulent pleuritis the patient was discharged cured on Nov. 30th A year later he was brought back in order to have an abscess opened which had developed in the track of the cicatrix; *he left the hospital all right ten days later.*

In connexion with hepatic cysts encroaching on the pulmonary area and simulating affection of the latter possibly it may not be out of place if I give the notes of the following case.

CASE 4 —A boy, aged eight years, the brother of the last patient, was taken to England in order to have an operation performed for hydatid tumour of the right lung. On arrival the boy was placed under the care of a hospital surgeon who confirmed the diagnosis and, without resection of the rib, made an opening in the fourth intercostal space and inserted a trocar and drew off a large quantity of clear fluid; a drainage-tube was inserted into something, little or no discharge followed, the tube was soon omitted, and the wound rapidly closed The surgeon informed the mother that it was safe to take the child back to South America as the cyst would be sure to be absorbed. After a week on board ship the patient again complained of respiratory discomfort and by the end of the voyage (24 days) it was observed that he was losing flesh and had some nocturnal fever with sweating and an occasional sense of chill. He was taken immediately to the camp in the hope that the *invigorating* air of the *pampas would soon establish convalescence.* Reference, however, had soon to be made to my friend Dr. Peard who found things in a worse condition than when the patient had left for England, there being marked emaciation, sweating, and occasional rigors. The temperature was 104° F and the right chest, from the third rib downwards, was immobile, dull, and breathless Dr. Peard immediately took him to Buenos Ayres and assisted me on the day following his entry to hospital in the operation Having removed a portion of the fifth rib in the anterior axillary line healthy lung tissue presented. A needle was inserted into the lung but nothing was found. On attempting to feel for the diaphragm the lung was discovered to be densely adherent to the diaphragmatic pleura and on separating some of the adhesions the diaphragm was found bulging considerably upwards. A needle was inserted into the liver and a syringeful of pus was withdrawn Having attached the parietal to the diaphragmatic pleura by a circular suture of catgut the diaphragm was incised and a white-walled cyst presented which was opened and fully a quart of greenish-yellow pus with a large necrosing endocyst was removed from the liver. A large drain was inserted and a rapid cure followed.

I think this case tends to prove the futility of merely incising the chest wall as a means whereby hydatid cysts may be effectively dealt with.

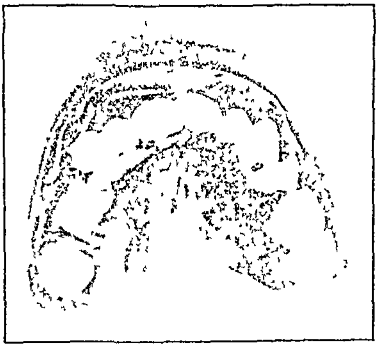
Buenos Ayres.

A CASE OF GENERAL INFECTION BY A NEMATODE, ACCOMPANIED BY HYPERTROPHIC GINGIVITIS.

BY J. DENCER WHITTLES, B.D.S. BIRM., L.D.S. R.C.S. ENG.,
CURATOR OF DENTAL HISTOLOGY AND PATHO-HISTOLOGY, UNIVERSITY OF BIRMINGHAM.

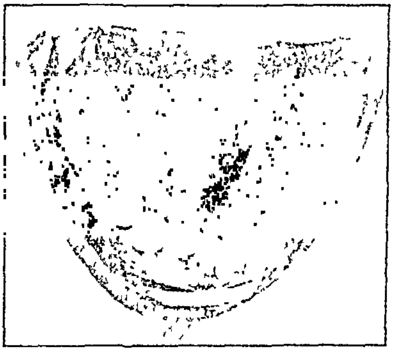
A YOUNG woman, aged 19 years, of robust appearance and weighing 9 stones 8 pounds, was sent to me at the General Hospital, Birmingham, in March, 1902, after having been treated at the Dental Hospital for thickening of the gums, which was causing considerable protrusion of the upper lip and consequent *deformity of the facial* contour. The treatment followed, according to the patient's account, consisted in cutting away portions of the gum and the extraction of loose teeth, but in spite of the free paring the growth became more marked. The illustrations (Figs 1 and 2) are from photographs of models of the upper and lower jaw respectively, made from impressions. It will be noticed that the hypertrophy is much less evident in the lower jaw, and this fact, together with the increased amount in the upper being on the right side, suggested that something had been applied with the right hand in some way. The increase of thickening came about gradually, commencing in May, 1901, so that about ten months had passed before the case came under my notice. On questioning the patient I learnt that she was very fond of dumb animals, especially dogs, and on further inquiry was informed that she was in the habit of fondling and kissing the dog at home, which had died the previous Christmas, a little more than two months prior to my seeing the patient On examining the mouth I found the greatest hypertrophy of the muco-periosteal tissue was situated between the first upper right premolar and the central incisor of the same side. It shelved off gradually to the left upper canine tooth, whilst in the mandibular alveolar border there was some hypertrophy occupying a corresponding position to the upper jaw, but to a much less degree The upper teeth were slightly moveable on pressure, and although there was so much thickening the resilience was so marked in the soft tissue as to lead me to suspect the removal of some of the alveolar process. This surmise was found to be correct as subsequent examination showed considerable absorption of the osseous tissue I extracted the right upper second premolar, which had become

FIG. 1.



Anterior aspect of the model of the upper jaw.

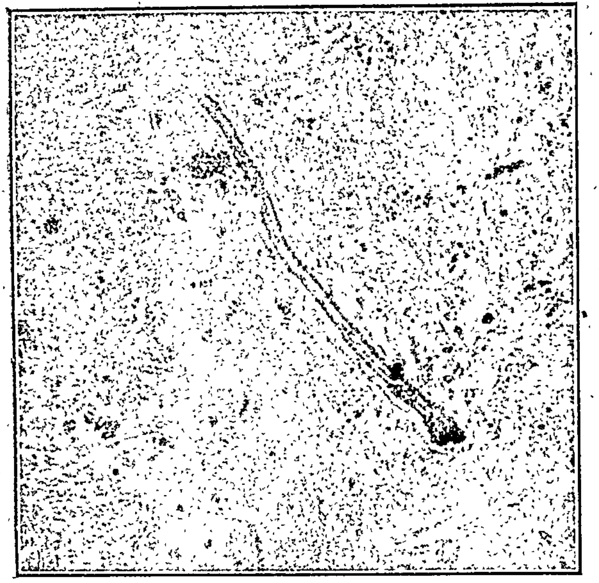
FIG. 2.



Model of the lower jaw.

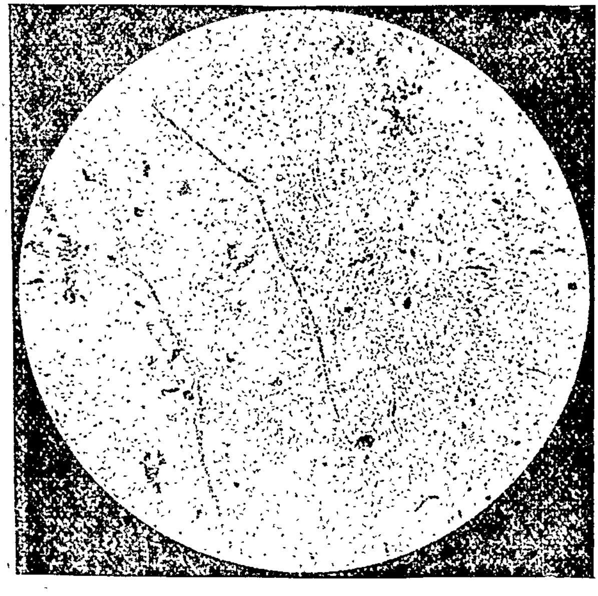
hopelessly loose, and at the same time was thus better able to excise a little muco-periosteum for microscopical examination as I suspected from the history obtained some form of parasitic invasion. Sections after due preparation were cut and stained in various ways for demonstrating bacteria, but none were to be found after most careful examination. Instead there were to be seen in almost every section nematodes complete or portions of them (Fig. 3). This shows a field including the Malpighian layer with deeper cells of the epidermis and the submucous tissue of the muco-periosteum (gum); in the centre of the field is seen an embryo nematode. In Fig. 4 the parasite appears in a more advanced state; the curves are suggestive of its great locomotive power enabling it to reach distant parts of its host. In Fig. 5, stained by Gram's aniline gentian violet, the nematode is seen deeper in the submucous tissue than in the two former sections, whilst its length is greater and its alimentary canal is more easily discernible.

FIG. 3.



Nematode in muco periosteum of jaw. Stained by Gram's method. Zeiss D D objective. No. 18 compensating eye-piece. 33 cm. camera extension.

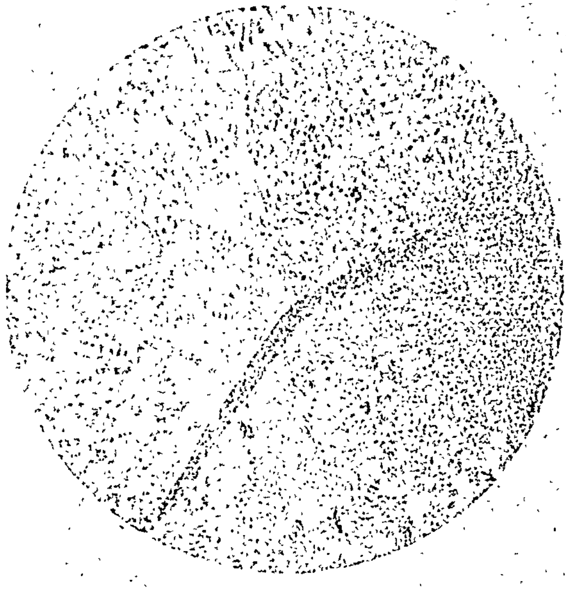
FIG. 4.



Stained by Gram's method. Zeiss A A objective. No. 1 eye-piece. 31 cm. camera extension.

On March 22nd, 1902, the third visit of the patient, I asked Dr. E. S. Nutting to make a blood examination, which he kindly undertook, and he reported that there was a slight increase of leucocytes—this is, 8000 per cubic millimetre. There were no marked increase in eosinophile cells and no myelocytes. Dr. Nutting further stated that under a $\frac{1}{12}$th of an inch oil immersion lens the films showed the presence of one or two leucocytes in a field and never more; this statement should be borne in mind and compared with the condition found later. Having discovered the source and something of the nature of the infection my next step was to search for other signs and symptoms which might be occasioned by the parasite. The patient stated that she had had "an abscess" over the sternum in the middle line and at the nipple level about Christmas, 1901 (when the dog died), and since then at various times in other positions, but chiefly limited to the right side of the head, neck, and trunk. Down to the present time such lesions had not appeared upon either the upper or the lower extremities. In May, 1902, a "carbuncle-like" swelling was incised over the pomum Adami, from which a considerable amount of pus was evacuated; rapid healing took place. A little later another formed over the right superior angle of the scapula and close upon this another formed over the outer angle of the right eye at the edge of the hairy scalp. These "carbuncle-like" swellings were allowed to break down naturally as the patient had gone into the country for a change. The last to form was noticed on Dec. 1st, 1902. There was only a slight swelling on rising from bed in the morning and at night it was too painful to wear clothing over it, so rapid had been its formation. Many pustular swellings had occurred from time to time but these did not appear to have given the patient much inconvenience, as the inflammation was apparently only trifling, although a circumscribed button-like induration accompanied each. On Dec. 11th such a pustule formed on the inside of the right cheek. A photograph of the patient's back was taken on the 14th and it showed the scars resulting from the carbuncle-like swellings, the lowest being situated in the middle line of the lumbar region. I incised an upper darker coloured swelling seen at the base of the neck, which photographed as a black spot, but it was of reddish hue. From it there escaped some 30 minims of blood mixed with only the slightest tinge of pus, obtained by deep pressure. On microscopical examination I found at least ten of the nematodes in more or less complete forms.

FIG. 5.



Stained by Gram's method. Zeiss A A objective. No. 18 compensating eye-piece. 33 cm. camera extension.

I wish to express my gratitude to Mr. W. E. Collinge, B.Sc., F.Z.S., lecturer on zoology at the University of Birmingham, for examining the sections with me, and also to Professor W. C. McIntosh, St. Andrews University, who has kindly interested himself by writing to me at length on this subject after examining sections and photomicrographs which I had prepared. He agrees with me that the nematode was probably the cause of all the trouble and further states that the suggestion that its source was a dog was borne out by the history of filaria. The aforesaid dog was a crossbreed—a Pomeranian crossed with a Skye terrier; its previous owner had never been out of England; he had had it from a puppy up to two years old when it was given to the patient's parents with whom it had lived four years. The patient had never been away from home prior to the infection, except a day excursion to Matlock, and had never bathed in the open, so that there is little evidence of any other source of infection than the dog.

As the nematode is a transparent object it can readily be overlooked in sections unless stained with methylene blue. On Jan. 15th, 1903, Dr. James Miller, assistant lecturer in bacteriology at the University of Birmingham, kindly made a careful examination of the patient's blood and furnished me with the following particulars:—

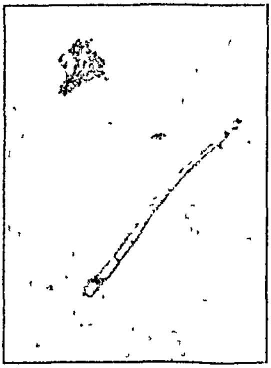
Red blood corpuscles ...	4,500,000 per cubic millimetre.
White blood corpuscles ...	9300 „ „ „
Hæmoglobin	80 per cent.

Differential Count.

Polymorphonuclears	65·3 per cent.
Lymphocytes	22·0 „
Large mononuclears	6·7 „
Transitional forms	4·5 „
Eosinophiles	1·5 „

The above averages were the result of two separate examinations. On comparing the above result with that found by Dr. Nutting there is at the present time a considerable increase of leucocytes, that is, 1300 extra per cubic millimetre will be observed. Fig. 6 is a portion of a photomicrograph of a thick untreated film of fresh blood taken from the same source as the foregoing. There is one nematode in the field exhibiting the same characters as seen in Fig. 3, photographed *in situ* in the muco-periosteum.

FIG. 6.



Thick film of fresh blood taken on Jan. 10th, 1903, untreated. Zeiss A A objective. No. 18 compensating eye piece. 33 cm. camera extension.

With regard to past literature on this particular parasite, so far as I can gather from books and papers written in English, the only similar case is described by Surgeon O'Neil, R.N., in 1875[1] who states that actively moving filariæ were found by him in papules which occurred singly, the worms measuring 0·01 inch by 0·002 inch, and bearing two black marks at the head end. According to Surgeon O'Neil the infection is said to appear after an incubation period of three days. If this is the same parasite I am able to confirm Surgeon O'Neil's statement that it is contagious, as I have found a similar parasite in the blood of the mother of the patient. A disease resembling Surgeon O'Neil's craw-craw was described some time ago[2] by Professor Neielly under the title "dermatose parasitaire." A French lad who had never been abroad became affected with a papulo-vesicular eruption resembling scabies, in which Professor Neielly found a filariform parasite somewhat like that discovered by Surgeon O'Neil in craw-craw. It had the same peculiar cephalic markings; in addition it had a well-defined alimentary canal and rudimentary organs of generation. Manson[3] suggests that "as the skin parasite in O'Neil's disease may have been an advanced form of filaria perstans this parasite normally and in pursuance of its evolution escapes from the human body through the skin after undergoing there a certain measure of developmental advance." This, I have every reason to believe, has been borne out by the skin lesions occurring in this case. So far as I can learn this case is unique and is of itself a sufficient warning that all should abstain from kissing members of the carnivora—a habit which, both with dogs and cats, is, alas, too frequently indulged in by the tender sex.

Birmingham.

A CASE OF

FULL-TIME EXTRA-UTERINE PREGNANCY; FŒTUS LODGED IN A CAPSULE OF THE OVARY IN A PERITONEAL SAC RESEMBLING THAT OF THE TUNICA VAGINALIS.

BY JAMES OLIVER, M.D., F.R.S. EDIN., F.L.S.,
PHYSICIAN TO THE HOSPITAL FOR WOMEN, SOHO-SQUARE.

A WOMAN, aged 33 years, who had been married nine years, came under my care at the Hospital for Women on Dec. 31st, 1902. She had had three children and one miscarriage. The last child was born three and a half years previously and since the birth of this child she had enjoyed good health. On Jan. 12th, 1902, the patient menstruated as usual and thereafter no hæmorrhagic discharge from the vagina was noted until Dec. 13th—i.e., during a period of 11 months there was complete amenorrhœa. The hæmorrhagic dischage which appeared on Dec. 13th continued without cessation until I removed the fœtus and placenta by laparotomy on Jan. 1st, 1903. Although this hæmorrhagic discharge flowed continuously for 18 days it was never large in amount and it ceased immediately after the operation. When the menstrual discharge failed to make its appearance in February the patient considered herself pregnant and as the gestation ran its full course without producing one symptom different from those which she had experienced during her previous pregnancies she did not seek any opinion regarding her condition until she observed that in spite of the reappearance of menstruation the abdomen did not diminish in size. The patient felt the movements of the fœtus for the first time about the end of June, but she thought that she never felt them after about the middle of October. Pain was never complained of and no labour-like pains were ever experienced. The physical signs were as follows. The abdomen, I found, was occupied centrally by a large globular swelling extending from the pelvis to four and a half inches above the umbilicus. Palpation detected the various parts of the fœtus, but these were not more easily defined than we find them in many cases of uterine gestation. No sounds were detected [illegible] ...ur. The breasts displayed the [illegible] of pregnancy and from both [illegible] ...ained. The cervix uteri, which was not specially soft, was but little deviated from its normal position in the pelvis. The body of the uterus could not be defined and separated from the abdomino-pelvic swelling, but the cervix did not appear to be structurally continuous with the latter.

Operation was performed o[illegible] was opened mesially betwee[illegible] account of the then revealed [illegible] to the tumour and as there was promise that I might remove intact the sac containing the fœtus and placenta I extended the incision to four inches above the umbilicus. The right mesovarium and mesosalpinx were spread out over the lower right half of the tumour and in consequence of this state of affairs the posterior wall of the uterus was closely applied to the left anterior surface of the tumour. The uterus was slightly enlarged. The tumour elsewhere was enveloped by, and adherent to, omentum and bowel. The right mesovarian and mesosalpinx were ligatured and severed from the tumour and the uterus thereafter sank down into the pelvis. The omental and bowel adhesions were then dealt with and after freeing these the tumour was found to have a broad and thick attachment to the posterior abdominal parietes. The sac containing the fœtus and the placenta was drawn out of the abdominal cavity and pressed over towards the left flank. It was freely incised and the fœtus and placenta were now extracted therefrom. The wall of the sac varied in thickness from a quarter to three-quarters of an inch except over a small area about 2½ inches in diameter at its upper and right border where it was extremely thin. It was thickest towards its junction with the posterior abdominal parietes with which it appeared to be structurally continuous. On this account and because the placenta had been implanted over this situation I excised the anterior half of the sac and stitched the remaining portion to the anterior abdominal wall, leaving an opening of sufficient size to allow of free drainage. Eventually the inner lining of the sac was shed piecemeal and on Feb. 3rd granulation from the bottom had so progressed that the cavity was almost obliterated and convalescence was well advanced.

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[1] THE LANCET, Feb. 20th, 1875, p. 265.
[2] Archives de Médecine, April, 1882.
[3] Patrick Manson, M.D., LL.D.: Tropical Diseases, 1903.

The above is the fifth case of full-time extra-uterine pregnancy which I have had to deal with and all have been operated upon successfully. In two out of my five cases the fœtus arrived at maturity without one symptom different from those of a normal uterine pregnancy being experienced. In three there had been occasionally a hæmorrhagic discharge from the vagina during the life of the fœtus. In these three pain more or less severe had been complained of from time to time during the evolution of the pregnancy but in none of the five cases were labour-like pains experienced, not even at or about the time when the fœtus probably died. In two only was there extrusion of decidual membrane per vaginam. In one case only was there elevation of temperature and in this suppuration of the sac had occurred and the fœtus floated in about six pints of creamy inodorous pus. In three the fœtus and placenta were lodged in the substance of the broad ligaments: two were on the right side and one was on the left. In one only of these broad ligament cases was I able to extract the fœtus from its nidus without opening the peritoneum; in the other two the reflection of this serous membrane from the broad ligament on to the anterior abdominal wall had not been sufficiently elevated to allow of this, consequently the upper portion of my incision opened the peritoneal cavity in both more or less extensively. In two of my five cases the peritoneum was incised co-extensively with the abdominal wall generally and the tumour containing the fœtus and placenta was to all intents and purposes in both covered in its entirety with peritoneum of its own. One of these, which was published in THE LANCET of July 25th, 1896, p. 241, was undoubtedly an example of ovarian gestation; the other is the case which I now record and in this the fœtus and placenta were lodged in a peritoneal sac—a sac similar to the so-called ovarian capsule found in some vertebrata. This sac, except at its right upper border where it was thin and appeared to be composed of adventitious membrane, was dense and thick. Originally it communicated more or less freely with the general peritoneal cavity but at an early stage of the gestation it became closed by new membrane and in this way the very thin portion just referred to may be accounted for. At first it was difficult to explain the attachment of the sac to the posterior abdominal parietes, but this became comprehensible when one recalled that in some cases the ovarian capsule is formed in a peculiar manner by division of the ovarian ligament and that in such the ovarian ligament may be traced in the posterior abdominal parietes up to the level of the lower border of the kidney. The ovarian capsule is a structure quite distinct from the ampulla of the tube and in some cases the tube traverses for a distance the parietes of this capsule. In operating upon cases of intraperitoneal hæmatomata resulting from ectopic gestation one occasionally finds the ovary more or less concealed in a peritoneal sacculus and I am inclined to think that this is an abnormality of not infrequent occurrence. In cases of full-time extra-uterine pregnancy and quite independently of any operative interference the menstrual function tends to reassert itself in from four to 12 weeks after the death of the fœtus—i.e., at about the same time as after normal delivery when the child is either born dead or is not suckled. It is noteworthy, however, that although the menstrual discharge is not, as a rule, more profuse it is apt to be more prolonged in the former group of cases.

Gordon square, W.C

NOTE ON THE ETIOLOGY OF THE SLEEPING SICKNESS.[1]

BY ANNIBAL BETTENCOURT,
AYRES KOPKE,
JOSÉ GOMES DE REZENDE, JUN.
AND
ANNIBAL CORREIA MENDES,
MEMBERS OF THE PORTUGUESE COMMISSION.

THE bacteriological researches which we have undertaken in order to illustrate the etiology of sleeping sickness were systematically carried out principally on those organs and tissues of the body in which, guided by the knowledge of former pathological investigations and by the results obtained in the first necropsies which we made, we knew that the principal lesions of the African disease, which is anatomically a meningo-encephalo-myelitis, are found.

In our first report, dated June 9th, 1901, regarding the six cases observed in Principe, we said that the preliminary and restricted work which up to then had been accomplished seemed to "guide us in the sense of the infectious nature of the sleeping sickness." Two months afterwards (August 10th), in Loanda, we first proved the existence of a diplo-streptococcus in the cerebro-spinal fluid *intra vitam* (six positive results in nine cases) and in the subarachnoid exudate (13 times in several necropsies which were performed); the principal characters of the germ could only be demonstrated in an imperfect and summary way owing to the absolute impossibility of making a complete study of it up to that date. These results were published in September, 1901.[2] In Lisbon (August 7th, 1902) we finally gave a demonstration, illustrated by diagrams and by the exhibition of specimens, of cultures, and microscopical preparations which had been collected in the course of a great number of researches from the cerebro-spinal fluid obtained by lumbar puncture *intra vitam*, and from the exudate and fluid of the *ventricles obtained after death, from* the blood, ganglions, and spleen, demonstrating also in numerous microscopical sections, especially of nervous tissue, the existence of the parasite previously described lying within and outside the vessels. We therefore particularly pointed out, in order to admit of no doubt, that the micro-organism in question ought to be included in the streptococcus group and we proposed to give to it the name of "hypnococcus."[3] The following were our words: "The general description of the principal characteristics of the hypnococcus being given, let us see if it is possible to determine its place in bacteriological classification. We rather considered it, in our first report, as a type of transition between the streptococcus and Fraenkel's diplococcus. We can, however, affirm to-day that it is easy to distinguish it from the latter. It is enough to say in order to separate it from Fraenkel's diplococcus that it grows on gelatin and in other media at a temperature lower than 24° C. But we wanted to go further and we followed the plan proposed by His to establish the differential diagnosis between the pneumococcus and the bacteria of the streptococcus group. Water is mixed in equal portions with the serum of oxen, properly alkalinised and sterilised, and we add 1 per cent. of inuline. This sugar is fermented by the pneumococcus and a change takes place in reaction, from alkaline it becomes acid and causes the coagulation of the medium. Our diplococcus grows well in His's fluid and the reaction is not modified nor does the fluid coagulate even after a month's stay in the incubating oven."

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[1] This note belongs to the first part of the chapter, "Recherches Bactériologiques," of our report now in the press.

[2] Doença do Somno. Relatorios enviados ao Ministerio do Marinha pela Missão Scientifica nomeada por Portaria do 21 de Janeiro de 1901, Lisboa, 1901.

[3] Doença do Somno. Trabalhos executados até 6 do Agosto de 1902, pela Missão enviada a Angola pelo Exmo. Ministro da Marinha, composta de Annibal Bettencourt, chefe da Missão, Ayres Kopke, José Gomes de Rezende, jun., e Annibal Correia Mendes. (Revista Portugueza de Medicina e Cirurgia, Nos. 139 a 144, Agosto a Outubro, 1902.)

We read lately in a medical journal[4] a previous report of the bacteriologist Castellani, a member of the English Commission sent to Uganda to study the sleeping sickness, in which he found while making his investigations in the same manner as we had already done a streptococcus in the cerebro-spinal fluid of patients during life and after death, which the author thinks is a different one from ours. This idea probably must be due to the fact that Castellani only knew of our first reports, which were erroneously translated,[5] in which the description of our bacteria might give place to some doubts in regard to its bacteriological classification.[6] However, after this work we described it more precisely and considered it as belonging to the numerous streptococcic group (August 7th, 1902).

It is necessary to say that, though some divergencies exist between what we said in our first report regarding the bacteria and the one which Castellani found in Uganda, they are not important, and we think do not justify Castellani in establishing such a radical distinction. It might be considered that the difference either proceeds from the diversity of the two bacteria or from the conditions under which the observers worked. Castellani considers only the first proposition and he completely forgets the second, which was in reality the principal one. The proof of the small value of the facts put forward by Castellani to establish this difference is shown by himself in the way in which he concludes his report, being apparently exactly of the same opinion as we were in August, 1901. We then said: "As to the bacteriological classification of the diplo-streptococcus only further experience and time can decide. Its analogies with Fraenkel's diplococcus on the one side and with the streptococcus on the other are certain; but the *organism cannot be with certainty relegated to either group*, though there is close relation between the two, as all bacteriologists allow. What we have said until now of our diplococcus is that it seems to be a transition between Fraenkel's diplococcus and the streptococcus." Castellani says the following about the bacteria which he found: "From the description just given I think that this germ must be considered a new variety of streptococcus. Every bacteriologist knows how difficult it is to differentiate sharply the varieties of streptococci on account of the numerous transition forms that occur, even a sharp separation between the streptococcus pyogenes and the streptococcus lanoceolatus (Fraenkel's diplococcus) seeming to many authors to be impossible." Lower down he says: "I think that this organism is a distinct variety of streptococcus, to be classed between the streptococcus pyogenes and the streptococcus lanceolatus (Fraenkel's diplococcus), and it might be called the streptococcus of the sleeping sickness." This means that Castellani and ourselves in our first reports both came precisely to the same conclusion and expressed ourselves in identical terms. We cannot understand how this could happen if in reality distinct species were in question, the studies being made quite independently one from the other. The same impression on the investigators having been left, although there was a considerable difference of time and place at which the investigations were made, can only signify that the result of the researches was the same, or, in other words, that the two micro-organisms isolated by us in the West of Africa and by Castellani in the East are the same.

Let us see, however, upon what basis Castellani considers his bacillus to be a different one from ours. We are sorry that he did not see the Portuguese journal in which we published our second work, which was of much earlier date than his, for on reading this all doubts should cease and everybody would think it superfluous to speak of a question of priority. Castellani says, as regards the diplo-streptococcus of the Portuguese, he does not think that any confusion can arise. "The Portuguese state that the culture of their germ generally failed every time on the usual media like agar, gelatin-agar,[7] &c., and with gelatin they never succeeded in obtaining cultures." The only differences, then, are merely that our cultures nearly always failed in the usual media and that we did not obtain them on gelatin. We said, conformably to the text of our report, "The diplo-streptococcus found by us grows badly in nearly all the nutritive media usually employed. The bouillon, agar-agar, simple or glycerinised, nearly always fail. The liquid proposed by Martin for the cultivation of Löffler's bacillus and obtained by the maceration of the pig's stomach gives a much better result, especially if we can make it solid by the addition of agar." What is concluded in our text is that the bacteria grows badly, but this does not mean that it does not grow at all. We add that it grows much better in Martin's media, for one c[illegible] sents some of the colonies grow[illegible] this author. These facts ough[illegible] pose that the absence of constant growths in the media referred to proceed more from their defects than from the biological peculiarities of the bacteria. In fact, in our first report we showed that the failure to obtain a growth was really owing to the short time occupied by our researches and to the methods we employed *for isolating the organism.*

We may say that for the preparation of our media we always employed Witte's peptone, which being very rich in albumoses is not so favourable for the germination of the bacteria as some others are. Nicolle and Remlinger especially point out this fact in their excellent book, "Traité de Technique Microbiologique" lately published; we verified this recently on different bacterial species including the hypnococcus. This last fact is no less important and may have greatly influenced our results, especially in the inoculations performed with the products procured from the human body because in these circumstances, as it is known, the bacteria are more easily influenced by the unfavourable conditions of the media. In Martin's media, which have for bases a peptone prepared *ad hoc* in the laboratory, the same thing does not happen and that explains the better *development.* *Finally,* Wassermann isolated in acute articular rheumatism a micro-organism belonging to the streptococcus group which only grows in strongly alkaline media, to which has been added Chapoteau's peptone, cultures not being obtained when Witte's peptone is used, as usually employed in Germany. All this is set aside because for a long time we have managed to obtain, as Castellani did, development in all these media. Months before the publication of his work we published a description of our cultures on agar, bouillon, and potato, in which we obtained identically the same results as Castellani. We also point out the absence of the coagulation of milk and the absence [illegible] in respect [illegible] with us. [illegible] on gelatin, for the simple reason that we have already obtained cultures in this medium in Lisbon—flesh pepton-gelatin and Martin gelatin. These cultures were exhibited at the time of our conference (August 7th, 1902) and the description of them may be found in the *Revista, Portugueza de Medicina e Cirurgia Praticas*, where we state the reasons to which we attribute the negative result obtained in Loanda.

We never made direct inoculations of morbid products in this medium, so we cannot say if they would be successful, nor does Castellani say in describing the streptococcus if he made use of all the media which he speaks of for the primary cultures or if some of them were only employed in the subculture; this makes a great difference with regard to the resu[illegible] which [illegible] tidis of [illegible] all the [illegible] germs d[illegible] them dc[illegible] remarkable is our agreement in various points of the description. Some have already been mentioned. We have also shown various instances of form and size, and the existence of groups from the [illegible] may be shorter or lo[illegible] human subject or fr[illegible] refers. The charac[illegible] aspect which the hypnococcus takes according to this author's description, all is in complete agreement with ours.

We further point out, before concluding, that our investigations were not limited to culture and microscopical examinations of the pathological fluids of the organism. We also studied numerous microscopical sections, especially those of the nervous tissue, and were the first to find and mark out the presence of *the hypnococcus.* Such sections were also

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[illegible]

[illegible] sent [illegible] ow- [illegible] seen by Patrick Manson some time ago in London, by Marmorek of the Institut Pasteur in Paris, and were finally presented by Mense at the last Colonial Congress assembled in Berlin.[8] How can it be suggested that the bacteria so often isolated by us in pure culture may not be the same as the one seen in the sections and exudates, the identical morphology being given? and how can the germ isolated by Castellani from the same regions of the body where we obtained it during life and post mortem, not be the same we saw in our microscopical sections?

After all this there is not the slightest doubt that Castellani's bacterium is the one which we described and that his investigations are a complete confirmation of ours. This is the original and important fact. The priority in the question is relatively a secondary one, as no one can honestly and *sine irâ* contest that it does not belong to us; but the works of this member of the English Commission, done quite independently of ours and in quite different and distant regions, do not in the least lose their merit or the important signification they bear for the clearing up of the etiology of sleeping sickness. It is, in fact, the first time that etiological researches of the African lethargy have been thoroughly verified and identical results arrived at.[9]

ON A CASE OF ARTERIAL OCCLUSION AND GANGRENE.

BY ANDREW DUNLOP, M.D. EDIN.,
CONSULTING PHYSICIAN TO THE JERSEY GENERAL DISPENSARY AND FEMALE ORPHANS' HOME.

IN November, 1899, I was consulted by a retired officer of the army on account of pain in the left leg and foot. He was a spare, active man, in his fifty-third year, with a complexion ruddy from enlarged capillaries and with the skin of the hands also of a high colour. In India, when a young man, he suffered from malarial fever and dysentery and he also had dysentery while in Egypt in 1882. Of late years he had been liable to dyspepsia, and in 1898 he had tobacco amblyopia which afterwards improved. Some time in the summer of 1899, I think, I had attended him for painful redness and swelling affecting the ball of the left great toe and running up the dorsum of the foot between the first and second metatarsal bones. The pain which he complained of when I saw him in November was intermittent, occurring in paroxysms which often came on in the early hours of the morning. It ran down the front of the leg and along the dorsum of the foot and was felt in the ball of the big toe and the distal part of the foot. The foot was sometimes dark red and congested, when it felt hot, and sometimes it was pale and cold, conditions resembling the syncopal and asphyxial states of Raynaud's disease. Stiffness and some pain behind the knee-joint were also complained of. The heart, though perhaps a little weak, was perfectly normal and there were no indications of atheroma or arterio-sclerosis in any of the accessible arteries. The urine was free from albumin and sugar and in all respects normal. The lungs were healthy. The tongue was somewhat furred and there were some dyspeptic symptoms but the abdominal organs were otherwise healthy. The temperature was normal. Later, pulsation was observed to have ceased in the posterior tibial artery and the dorsal artery of the foot; the pains became more frequent and severe and the varying conditions of heat with dusky redness and coldness with pallor became more marked. Pains of a slighter degree were also felt in the right leg and down the arms, and the right foot also showed some signs of varying congestion and pallor, as also did the hands.

In the spring of 1900 he improved somewhat for a time, but about May he got worse again and a black spot formed on the under part of the distal phalanx of the great toe and another on the tip of the little toe. The extreme tip of the little toe gangrened and the process there made no further advance but it slowly went on in the big toe till it was entirely black and mummified. A distinct line of demarcation, well beyond the joint, formed in, I think, the month of July, but it made one or two advances during the next month or two. In September there was a good deal of constitutional disturbance due, apparently, to septic absorption, the temperature rose, and he had a severe attack of aphthous stomatitis. At the beginning of October, as the line of demarcation was making no further advance, Mr. A. E. Hind removed the gangrened toe by cutting through the first phalanx where the separation had taken place down to the bone, just beyond the metatarso-phalangeal joint. After the operation the patient improved rapidly and in a month or two the wound had healed and he was able to move about again.

From the end of 1900 to the spring of 1902 the patient was in excellent health, though he had occasional pains in the legs. About the month of April he consulted me on account of occasional attacks of sudden and severe pain at the bottom of the sternum and over the præcordial region, seizures which had very much an anginal character. A little later he had pain running down the sciatic nerve on the right side, and some time in May he began to have sharp attacks of pain running down the front of the right leg, the paroxysms very frequently occurring in the early morning as they had done in the other leg. In June the right foot was frequently, indeed mostly, hot and congested, and sometimes cold and pale, and soon no pulsation could be felt in the posterior tibial or in the dorsalis artery. About the end of the month two black spots appeared on the sole of the foot, one on the heel and the other on the under surface of the little toe, just on the bend of the first joint. In July suppuration occurred at the seat of the black spot under the toe and some matter was let out by a small incision. In August unhealthy-looking ulceration began to extend from this point, gradually spreading two or three inches up the outer side of the foot, and the toe became purple and gangrene set in. By the middle of the month the toe and the ulcerated part of the foot were completely gangrened and a line of demarcation had begun to form; but the next toe was evidently becoming implicated. All this time the patient's condition remained good. The temperature was normal or only slightly raised sometimes. The pulse was good but occasionally quick and not very strong. The urine was normal.

About the middle of September the fourth toe was gangrenous and the line of demarcation was advancing onwards and upwards. The constitution was now showing the effects of the disease. The temperature was frequently raised, though not often above 100° F., and at the end of the month there was a rather sharp attack of aphthous inflammation of the mouth and throat, as during his last illness. There was also an aphthous ulcer on the conjunctiva of the left eye which gave rise to inflammation. During all this time the pain in the leg and foot was frequent, almost constant, and often very severe.

On Oct. 4th, as the line of demarcation seemed at last to be stationary, the gangrened parts were removed by Mr. Hind, who cut through the fourth metatarsal bone and disarticulated the fifth at its tarsal articulation. The raw surface left looked pale and bloodless. About three weeks later the second and third toes had become gangrenous and a line of demarcation had formed on the dorsum of the foot which included them, though it was not developed on the under surface. The great toe had also a dry gangrenous patch on the tip and the nail had been removed owing to suppuration in the matrix. It was then decided that the dead and dying parts should be removed, and Mr. Hind, assisted by Dr. J. R. Muir, R.N., separated them by disarticulating the remaining four metatarsal bones at their tarsal articulation and making a flap of the sound skin of the sole to cover the wound made at this operation and the still incompletely healed one left by the last.

For a day or two after the operation the temperature rose in the evening to 102° and there was some general constitutional disturbance, but great improvement of the general condition soon set in. The mouth, which was still sore, got better, the inflammation in the eye gradually subsided, and an ulcer on the back part of the heel which had given some trouble began to mend. A week or ten days after the operation a part of the flap which was stretched over the internal cuneiform bone sloughed and the bone protruded through the opening. The projecting part became necrosed and on Dec. 1st it was found to be loose and was easily removed, leaving a vigorously granulating surface behind it. After the operation the attacks of pain still continued but they became less frequent and severe. There was also occasional pain in the left leg and foot and for a time the sole of the foot was sometimes congested and occasionally the foot was pallid. Pain was also complained of in the left arm and the fingers of both hands became bloodless now and then. By the end of January the wound had completely healed, though there was still some discharge coming from under the flap, and the patient was looking well and beginning to get about.

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[8] Archiv fur Schiffs- und Tropen-Hygiene, Band vii., 1.

[9] It is convenient to correct here a mistake in the English translation of our first report. It was said that we isolated constantly the diplococcus from the blood. This is absolutely incorrect. What we clearly confirmed was that in four cases examined in this point of view we only found it once. To-day we can add that we have had two positive results in seven cases. Castellani only isolated it once. We have here another point in which Castellani's researches agree with ours.

At about the middle of February, however, an apparent obstruction of the right femoral vein occurred. There was pain in the groin, the stump of the foot became swollen and purple, and there were paroxysms of severe pain in it. The whole leg was œdematous and the protruding bone in the stump became inflamed and bare. A fortnight later a similar attack took place on the left side and it was over a month before both legs had recovered and even then there were frequent pain and great tenderness in the stump of the right foot. The patient's health meanwhile improved greatly and by the middle of April the disease seemed to have entered upon another period of quiescence, though the foot still continued to give pain.

Though a description of the condition of the affected arteries cannot be given—fortunately for the patient—and though perhaps the possibility of slow-forming thrombus in atheromatous or sclerosed vessels cannot be quite excluded, this case has all the appearance of one of Friedländer's arteritis obliterans.

The heart was normal, the urine was free from albumin and sugar, and there was no evidence of atheroma or sclerosis in any of the accessible arteries. The obstruction could not have been caused by embolism, the lapse of time between the commencement of the symptoms and the occurrence of gangrene was too great. The arterial occlusion was evidently a gradual one. In this connexion the varying congestion and pallor of the feet are interesting, as they recall the symptoms in Raynaud's disease. This was most marked in the first attack; in the second attack the right foot was mostly congested and hot. The pains, from their severity and mode of occurrence, often led me to suspect neuritis, though there was perhaps not more wasting of the leg muscles than could be accounted for by disuse of the limbs and I did not notice any abnormalities of cutaneous sensation. The anginal attacks are also of interest when it is remembered that in specific cerebral arteritis—a typical obliterative arteritis—such attacks have been noticed and found to be due to affection of the coronary arteries. In this case, however, the attacks lasted for only a short time and did not recur, so they were probably of a purely neuralgic character. There were also pains in the arms, mostly the left arm, and the fingers were often dead and pale and the hands congested.

Friedländer[1] in his paper gives no clinical account of the disease; he confines himself to a description of its pathology and morbid anatomy. The morbid process begins by inflammatory cell growth in the inner coat which is thickened at the expense of the lumen of the artery. The other coats become affected and subsequently connective tissue formation sets in and the vessel is transformed into a fibrous cord. Complete obstruction is sometimes delayed by the continuance of the first, non-fibrous, stage in which the artery may not be completely blocked by the yet soft granular tissue, or occlusion may be hastened by the formation of thrombi in the partially obstructed vessel. The veins may also be affected. Friedländer says that obliterative arteritis is not so often primary as secondary to disease of the surrounding tissues.

Von Winiwarter[2] relates a case closely resembling that of my patient. The affected foot was amputated about four inches above the malleoli and he gives a most careful and detailed account of his examination of the parts that had been removed, pointing out that the morbid changes in the vessels were those previously described by Friedländer as arteritis obliterans. The veins were affected as well as the arteries and he also found that the posterior tibial nerve and its branches were involved and nearly doubled in thickness.

Dr. Prioleau in his Thèse (Paris, 1887) on "Rétrécissement Généralisé des Artères" does not seem to differentiate obliterative arteritis from arterio-sclerosis, but amongst his cases are some which resemble that of my patient and he describes morbid appearances similar to those recorded by Friedländer and von Winiwarter.

Dr. F. W. Mott has an excellent article on obliterative arteritis in vol. vi. of "Allbutt's System of Medicine," and both Dr. Prioleau and Dr. Mott give a full list of references, only one or two of which, however, I have had the opportunity of consulting.

St. Heliers, Jersey.

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[1] Ueber Arteritis Obliterans, Centralblatt für die Medicinischen Wissenschaften, No. 4, 1876.

[2] Ueber eine eigenthümliche Form von Endarteritis und Endophlebitis mit Gangrän des Fusses, Archiv für Klinische Chirurgie, No. 1, Band xxiii., 1878.

A FURTHER NOTE ON THE THERAPEUTICS OF A 10. PER CENT. SOLUTION OF SODIUM CINNAMATE IN GLYCERINE INJECTED SUBCUTANEOUSLY.

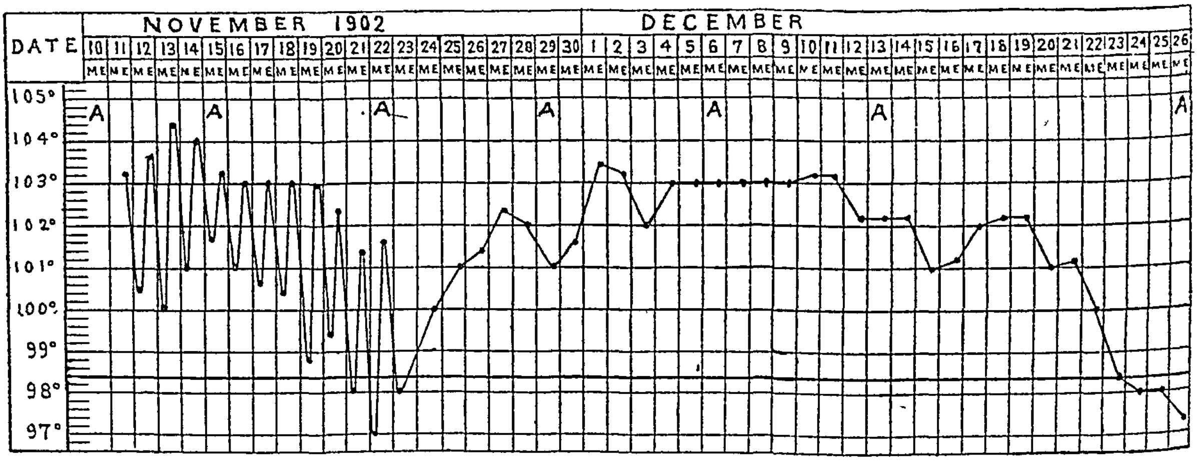
BY LOVELL DRAGE, M.D. OXON.

IN the preliminary note published in THE LANCET of July 12th, 1902, p. 66, the groundwork of the treatment was briefly mentioned. Surprise has been expressed that a drug could profoundly alter the conditions of two diseases which are apparently so dissimilar in every respect as cancer and tuberculosis. However, there are points connected with them which appear to lead in the direction of the thought that, whatever dissimilarity there may be in their external manifestations, the conditions which precede the alterations in the structure of the cells which are affected are alike in type and that the general conditions of health in patients diseased either in the one or in the other way are equally alike in type. The difference in the alteration in structure is in detail, profound as that difference is. The difference in the general conditions of health is equally in detail, but not so fundamentally. In both diseases there are conditions intimately connected with the cells attacked which precede the conditions of actual disease and in both the results of the disease are manifested by the condition known as cachexia, varying in details even amongst those smitten by the taint of the two diseases. It is necessary, therefore, in the case of both diseases to consider very carefully the conditions affecting the cells themselves before they are attacked by the one or the other disease. Every cell, however low in the scale of organisation, has certain properties of its own, functional as well as structural. These are properties which may be designated as inherited properties in the case of some, acquired properties in the case of others. It is impossible to state that in cells affected by these diseases there is any evidence to show that both properties do not exist, and, indeed, it may be stated quite definitely that in the absence of inherited properties those acquired are only with difficulty obtained. If this be accepted there can be little difficulty in finding the reason for the many and great differences not only in the structural alterations noted in both diseases but also in the progress and clinical history of them. Varied as [illegible] much more varied are [illegible] ...ngs. The variations which can be produced and perpetuated in many living cells are well known not only to the scientist but also to the stockbreeder and the gardener, although the latter know them in bulk, the former in sample. With the differentiation of the bacillus of tubercle and the demonstration of its connexion with the causation of the structural alterations in the cells which it attacked an important phase of knowledge was undoubtedly opened and so far as the improvement in the treatment of the disease goes there has resulted something. However, it never appeared to me that there was reality in that improvement. Under various treatments and under no treatment at all many patients become well—that is to say, that the masses of cells which had been attacked by the disease became cured in the manner adopted by nature.

The main lines upon which treatment has been generally based have been the improvement of the general condition of health by providing to the blood circulating in the vessels an abundant supply of oxygen and of nourishing food. It has been difficult in most cases, if not all, to say whether the drugs usually administered had any good effect, and still more difficult to find a satisfactory physiological reason for their administration. For many years past the speculation has ever been present with me, Why should it be possible to control the bleeding resulting from fibroid tumours of the uterus by the continued internal administration of a strong decoction of cinnamon sticks, and, indeed, to reduce their bulk? It appeared probable that something was supplied through the circulation to the tumour which influenced its growth. Subsequently, on the administration of the oil in cases of tuberculous and cancerous affections, and especially the latter, it appeared as if some modification of the progress of these affections was achieved. This being the case, I thought it right to ascertain the effect of placing a patient under treatment before removing a breast affected by scirrhous cancer. I therefore treated the patient before operation with oil of cinnamon and continued the treatment for three months afterwards. As the breast was only removed in the spring of 1901 it is impossible to speak definitely, but there is one point which struck me very forcibly and that was the rapid improvement in the health of the patient. I do not recollect any patient whose breast was removed for cancer to improve so rapidly, or to remain in such good health as this patient preserves up to the present date. Not only is this so, but in the spring of last year the patient showed me an old sebaceous cyst in her back. This had all the appearance of an atrophic cancer. She told me that she had had it for years, but did not think of mentioning it to me when I removed her breast. I was very anxious that the sodium cinnamate should be injected forthwith, but she refused any sort of treatment. She now tells me that "the place has dried up with a sort of scab."

The inference which I draw, although it is obvious that others may, and probably will, be drawn, is that both the breast and the cyst were affected by cancer at or about the same time and that the oil of cinnamon treatment profoundly modified the progress of the growth of the cancerous cyst and has so far prevented any return of the cancer of the breast. It may here be remarked that the breast was only removed by the old-fashioned method and that the axilla was not opened up.

The period has now arrived when I can take up the thread of my discourse at the date of the publication of the paper which I wrote for THE LANCET last year. Since that date I have been actively using the glycerine solution of cinnamate of sodium. The accompanying chart will demonstrate the effect of the drug upon an attack of acute pulmonary tuberculosis in a young man, aged 28 years, engaged in a printing office. I was asked to undertake his case by a patient of mine who told me the distressing and pressing nature of the case. A young man, married, with a young child and a wife dependent upon him, was told that he was a bad case and unlikely to live. He was at the time an out-patient at the Brompton Hospital and was rapidly losing flesh. His illness began in the autumn whilst he was taking a holiday. On Oct. 10th he first saw a medical man who eventually told him that his right lung was affected and that he must attend the Brompton Hospital, a course which he adopted. Physical examination revealed comparatively little, expectoration was very small, there were no moist sounds to be heard, but breathing on exhalation at the right apex was prolonged slightly and more noisy than was normal. I agreed with the other medical opinion that the case was one of early and acute pulmonary tuberculosis. The chart speaks for itself; the morning temperature was not taken after Nov. 24th. Seven injections of the 10 per cent. solution of cinnamate of sodium were given at the dates marked upon the chart. The man went to his work in the office a week after the first injection and remained at work until the end of the treatment. He gradually put on flesh, improved in spirits, and although there was a considerable amount of cough and expectoration during the progress of the case there was always a continued improvement in health, and the patient at the present time has no cough, is as fat as he should be, and is without any symptoms except those of good health.



Case of acute pulmonary tuberculosis in which cinnamate of sodium was injected. A, Injection of 30 minims. Morning temperatures were not taken after Nov. 24th.

A second case to which I should like to draw attention is that of a young girl who had been troubled for some months with chronic diarrhœa. When she first came under observation she was emaciated and passing often more than 12 motions a day. On examination nothing could be detected in the abdomen or chest abnormal in character, but her appearance was that of a tuberculous patient. Various treatments were tried but nothing produced any diminution in the flux from the bowels. The glycerine solution has been injected at varying intervals into the flanks since then. Her bodily condition has steadily improved and the number of actions of the bowels has been diminished by one half. Nothing more can be said at present about the case, but it appears probable that a satisfactory issue will be obtained.

The result of experience of the use of the drug so far has led me in the direction of the belief that in early cases of pulmonary tuberculosis a successful issue may be predicted with confidence and that in all more advanced cases amelioration may be guaranteed with equal confidence. No treatment obviously can restore cells which are destroyed absolutely and if there are not sufficient cells remaining which are capable of performing their work the organ of which these cells are a part can either not perform its functions at all or only in part. So long as healthy cells remain in an organ sufficient to carry on its work, just so long has treatment by cinnamate of sodium or any other treatment a chance of preserving the life of the owner of the organ. The case of early tuberculous laryngitis mentioned in my first communication is arrested and the patient is enjoying good health.

It is not my purpose to refer to other tuberculous cases at the present moment, but one of cancer of the tonsil, with a mass behind the angle of the jaw, presents points of interest. It is a case which has been seen by Mr. H. T. Butlin at St. Bartholomew's Hospital. The cinnamate solution has now been injected at varying intervals since the early autumn of 1902 Although the duration of the growth is not less than 12 months there is no difficulty now in swallowing, one small gland below the large mass has disappeared, and the action of the drug seems to have caused a fibrous incapsulation of the mass behind the jaw; the skin *is quite freely moveable over the mass The patient feels* little or no pain and generally appears to be in a condition unusually favourable in such a case, so far from the commencement of the disease I am now using injection of doses as large as 60 minims of a 11 per cent solution and with apparently quicker results. No symptoms of inconvenience are felt from the larger injection, but the pain caused *is of somewhat longer duration The amount of pain is not* very great and this is judged because patients readily return for treatment

Hatfield

RESEARCHES ON HIBBERTIA VOLUBILIS

BY JOHN REID, M A, M D, C M ABERD

THE parts of the plant used in the following investigation were the fruit and the pistils which had been preserved by drying They were obtained from Coraki and Manly Beach two places in New South Wales The plant was identified by the late Baron F von Muller, who has also supplied the bibliography[1]

Extraction with acetic acid and subsequent precipitation give the alkaloid dillenine, extraction of the residue with boiling alcohol takes up the oil, while by boiling the residue with liquor potassæ a solution of potassium dillenate is obtained, from which insoluble calcium or lead dillenate may be prepared and the acid eventually isolated On neutralising the potassium salt with lime an acid foam may be skimmed off, it is the colouring matter which I *propose to name "stephenic acid after the late Rev* George Stephen of Fordyce Banffshire On precipitation with ammonia the acetic acid extract yields a brown coloured neutral resin which is insoluble in ammonia water, and chloroform but dissolves in acids forming a tasteless solution Dillenine is soluble in chloroform which is used for isolating it, acicular crystals are deposited from the solution The dillenate of dillenine is deposited from the chloroform solution in transparent laminæ more or less perfect The acetic acid extract contains a little dillenic acid shown by the sherry colour produced on the addition of ammonia. In spirituous solution dillenine lessens the colouring power of tincture of guaiacum on a cut surface of potato When heated it becomes charred and burns with an odour of burning feathers An aqueous solution of the dillenate or acetate precipitates mercuro potassic iodide and iodurated iodide of potassium Given internally in doses of less than one grain of the dried substance it causes a lowering of the blood pressure, the pupil also becomes dilated and remains so for a few hours with disturbance of the power of accommodation

The oil is thick almost like palm oil and possesses the sickly odour of the flower When boiled with caustic potash it becomes whiter but is not saponified By keeping it becomes resinous in appearance It is soluble in benzene, water does not give a precipitate with perchloride of iron, gum or gelatin Stronger solutions of its salts with alkali metals show the following reactions —1 Ferrous sulphate gives a colourless flaky precipitate in a solution which is greenish by transmitted light and dirty black by reflected light, the precipitate is soluble in dilute nitric acid the solution being light sherry coloured by reflected and transmitted light. 2. Tincture of perchloride of iron gives similar reactions except that a light sherry colour takes the place of the green colour, some flaky deposit (dillenic acid) appears to be undissolved in both cases on adding nitric acid 3 Silver nitrate gives a dirty brown precipitate sulphiding very speedily, insoluble in dilute nitric acid but readily soluble in ammonia. 4 Silver stains on linen (recent) or on the fingers readily clear up on treatment with dillenate of *soda or ammonia and free ammonia 5 Dillenic acid dis*solves sodium bicarbonate with effervescence, the salt is lighter in colour than the ammonium or potassium salts Lead precipitates dillenic acid partially in a neutral solution or one containing a vegetable acid only and precipitates it completely in an alkaline solution The precipitate formed with alum may be washed, it has faint astringent properties *Lime water precipitates it completely if in excess* or in presence of an alkali and acetic acid redissolves the precipitate A potassium salt gives a precipitate (*a*) with acetic acid, the filtrate from (*a*) gives a further precipitate (*b*) with nitric acid and the filtrate from (*b*) gives with alum a precipitate (*c*) which is much less bulky than that obtained with acetic acid Dillenic acid seems to nullify guaiacum colouration of potato and gives no precipitate with the reagents for alkaloids The aqueous solution of the acid or of an alkaline salt keeps well (antiseptic) It is very insoluble in rectified spirit and entirely so in chloroform An earthworm placed in a very weak solution gave two or three convulsive tremors of its longitudinal muscles and died presenting a flattened appearance before and after death Possibly the substance may be valuable as a germicide In the human subject given internally in doses of less than one grain of the dried substance it causes slight griping, nausea at the throat and salivation with black motions (liver stimulation) There is no irritant effect and the taste is if anything pleasant and sweetish Lime water is a speedy antidote Dillenate of zinc may be used as a dressing

Stephenic acid like carminic acid is insoluble in water When washed it sinks as a granular precipitate and *yields* with ammonia stephenate of ammonium having the colour of carminate of ammonium The ammonium salt stains nuclei a beautiful rose colour which will not wash out like *carmine and may be mounted in dammar, glycerine dis*solves it so slightly that specimens stained with it may be mounted in this medium Stephenic acid after drying is more difficult to dissolve than when it is freshly prepared The ash of the plant consists chiefly of alumina, silica and iron

Southfields S W

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[1] F von Müller: Fragmenta Phytographiæ Australiæ vol vii p 125 vol xi p 91 Bentham: Australian Flora vol i p 19 Ersch and Gruber Encyklopädie Thunberg: Transactions of the Linnean Society, 1800 Rosenthal: Synopsis Plantarum Diaphoricarum 1862.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

NOTE ON THE RETARDED PULSE WAVE IN AORTIC REGURGITATION

BY WALTER BROADBENT, M A, M D CANTAB, M R C P LOND M R C S ENG,

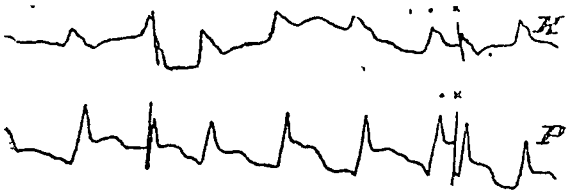
ASSISTANT PHYSICIAN TO THE SUSSEX COUNTY HOSPITAL.

THE accompanying four tracings were taken with an instrument of precision Mackenzie's cardiograph, attached to a Dudgeon's sphygmograph and go to prove Sir William H Broadbent's contention that the pulse in aortic regurgitation is more delayed the greater the regurgitation The first tracing was from a normal heart and pulse to show the usual delay, the pulse being 80 to the minute The second was from a case of slight aortic regurgitation with very little hypertrophy and a good second sound in the neck, though the diastolic murmur in the chest was very loud This showed no more delay than in the normal heart. The pulse rate was 60 The third was from a case of very marked aortic regurgitation with a large collapsing artery The apex beat was in the seventh space, four inches below and two inches outside the nipple, no second sound was audible in the neck The diastolic murmur over the aortic and pulmonic areas was much less loud than in the last case To the hand and in the trac

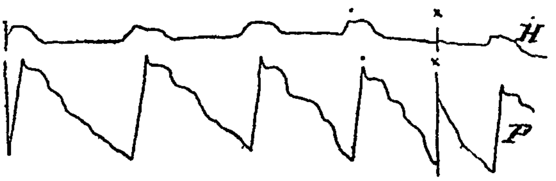
to be synchronous but the

between the carotid and the p

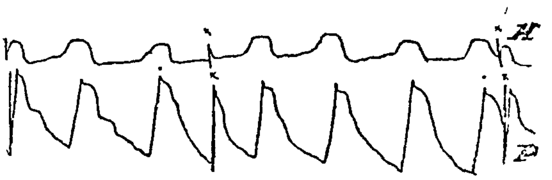
pulse was a whole interval behind the heart and the pulse rate being 80 the delay works out at about 0 75 seconds The delay between the apex beat and the carotid throb and between the carotid throb and the radial pulse were both appreciable to the finger The interval between the carotid and radial pulses was decidedly longer than with a normal heart, but that between the apex beat and the carotid was so marked that it raises the question, most difficult to decide, how late in the cardiac systole does the pulse wave start from the heart when the aortic valves are practically absent?



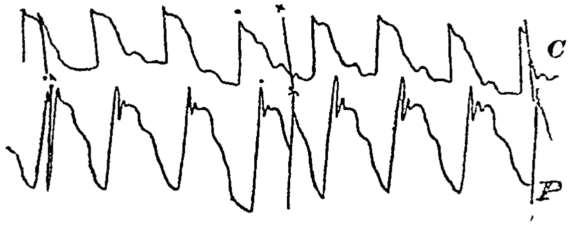
Normal.



Slight aortic regurgitation.



Severe aortic regurgitation.



Carotid and pulse; severe aortic regurgitation.

Brighton.

MICROSCOPICAL OBSERVATION OF THE GLYCOGEN REACTION.

BY DR. GIUSEPPE SPEZIA.

IN attempting to explain the biological significance of the glycogen reaction and to account for the presence of glycogen in the white corpuscles of the blood the following experimentally ascertained facts must be kept in mind. As I have already mentioned in THE LANCET of March 7th, 1903, p. 655, I found that the glycogen reaction could be produced by means of subcutaneous injections of fats (olive oil or hog's lard), albuminoids (peptone), and carbohydrates (glucose). The presence of glucose and peptone in the blood is proved by the phenomena of glycosuria and peptonuria. I have found that not only has glycogen a positive chemiotaxic action but also that peptone and glucose have it. Moreover the white corpuscles drawn into the capillary glass tubes used in the experiments on chemiotaxis and filled with solution of peptone presented the glycogen reaction, whereas the white corpuscles *in the blood* of the same animals as were employed in the experiments did not present it. These facts prove that the leucocytes contain proteolytic, amylolytic, and lipolytic diastases which enable them to form glycogen from albuminoids, carbohydrates, and fats. It is also known that these latter substances appear in increased amounts in the blood during digestion and in many infectious diseases. Achard and Loeper have stated this with regard to glucose in pneumonia and gastro-intestinal diseases. Becquerel and Rodier have stated it with regard to fats in diseases of the respiratory organs, pneumonia, tuberculosis, and puerperal fever; the occurrence of peptonuria supplies the evidence with regard to albuminoids in pneumonia.

Bearing these facts in mind the glycogen reaction may be easily and with much probability explained as a manifestation of the process by which certain substances abnormally abundant in the blood are converted into glycogen by the action of the polynuclear leucocytes. The hyperleucocytosis which according to my clinical observations accompanies the glycogen reaction may be similarly explained, because these substances have a positive chemiotaxic action. The hyperleucocytosis of infectious diseases is not the first sign of resistance to pathogenic agencies exhibited by the organism. The first sign of this kind is a chemical one characterised by the appearance of the above-mentioned substances in the blood. Hyperleucocytosis is therefore based upon chemical facts.

The glycogen reaction is of practical value from a clinical point of view, for the tests which give it are easily and quickly applied and when the reaction is obtained it points to the existence of hyperleucocytosis. In the contrary event, however—namely, when the reaction is not obtained—I hardly think that the present state of knowledge would justify the inference that there is no hyperleucocytosis.

Turin.

ABDOMINAL PAIN AS A SYMPTOM IN ACUTE LOBAR PNEUMONIA.

BY J. RAESIDE SMITH, L.R.C.P. & S. EDIN., L.F.P.S. GLASG.,

LATE HOUSE PHYSICIAN AND HOUSE SURGEON AT THE INGHAM INFIRMARY AND WESTOE DISPENSARY, SOUTH SHIELDS.

DURING the last few months several cases of acute lobar pneumonia have come under my observation. In all of these among the initial symptoms was one which is not too strongly emphasised in our text-books—namely, acute abdominal pain. In each case the signs and symptoms were typical of acute lobar pneumonia. I may state that in two of these cases morphia had to be administered subcutaneously on account of the severity of the symptom.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Prooemium.

LONDON TEMPERANCE HOSPITAL.

THREE CASES OF UNUSUAL HERNIA; HERNIOTOMY; RECOVERY.

(Under the care of Sir WILLIAM J. COLLINS.)

FOR the notes of the cases we are indebted to Mr. J. S. Hosford, surgical registrar.

CASE 1. *Richter's hernia.*—A single woman, aged 48 years, was admitted into the London Temperance Hospital on Nov. 12th, 1902, complaining that she had had a lump in the right groin for a year but that four days previous to admission the lump became larger and she had suffered from vomiting and had passed neither fæces nor flatus. Her general condition was good but there were considerable abdominal distension and tenderness and some redness over the swelling in the right groin, which was of the size of a golf ball and was dull and devoid of impulse. An enema brought no motion away. At 1.45 A.M. on the 13th Sir W. Collins under chloroform cut down on the swelling in the right groin. On opening the sac a considerable quantity of sanious but odourless fluid escaped. It was clear that a portion only of the circumference of the small intestine was external to the femoral ring but acutely strangulated. Sir W. Collins divided Gimbernat's and Poupart's ligaments and freely exposed the whole knuckle of intestine, a portion of which was nipped. About one-third of the circumference of the gut appeared to be involved and this was of a dusky purple tint and covered with a little flaky lymph It was sharply differentiated *from the rest by a grey line of strangulation It was* therefore deemed prudent not to return the damaged gut freely into the peritoneal cavity, but a ring of sutures was passed through the peritoneal and muscular layers of the adjacent healthy portion and the surrounding ligaments and fascia, so as to make the area *formerly strangulated face the* external wound The latter was left open and lightly packed with iodoform gauze Flatus was passed per rectum on the 14th and the general condition was good On the 16th some fæcal staining was noticed on the dressing and for a week *some fæcal matter escaped from the groin, though full* motions were passed per rectum The intestinal wound closed in a few days and the gut was drawn inwards by peristalsis, though retaining a ring of adhesions along the sutured line, *thus causing a puckering of the external wound, which closed completely by Jan 2nd, 1903 The patient was discharged* passing normal motions and with no hernia

CASE 2 *Piece of bone transfixing a hernial sac, simulating strangulated hernia* —A married woman, aged 64 years a multipara, had been ruptured for 44 years On Feb 26th, 1903, *she was "taken suddenly' with pains in the abdomen* and the seat of the old rupture—the left groin—became exceedingly tender, and she could not put back the hernia as she generally could She sent for a medical man who "tried to put it back for three days' and she was then *admitted to the London Temperance Hospital Her general* condition was not at all bad, but she had been frequently sick and the bowels had not acted for several days, though *an enema brought away scybala There was on admission* a smooth elastic swelling in the region of and resembling a *small femoral hernia It was irreducible and gave no* impulse but was excessively tender to handle and the left inguinal region of the abdomen was also very tender to the touch Sir W Collins advised operation and under chloroform he cut down and exposed the sac of *what appeared to be a hernia On passing the finger over* the surface of the sac he detected a sharp pointed foreign body On seizing this and withdrawing it it proved to be a piece of bone one and a quarter inches long and varying from an eighth of an inch to a quarter of an inch in width *This piece of bone was transfixing the supposed sac* A probe was passed along the track of the bone and the cavity was cautiously laid open It proved to be, as was suspected a hernial sac communicating through the femoral ring with the general peritoneal cavity, but untenanted There was *no evidence of any recent perforation of gut and how the* piece of bone, which was thought to be a rabbit bone, had *been deposited in and made to transfix, the sac could only be* a matter of conjecture The sac was removed, the wound was sewn up, and healing took place per primam A little cystitis troubled the patient for a day or two during convalescence but she was quite well and was discharged on March 27th

CASE 3 *Richter's hernia* —A married woman, aged 45 years, had suffered from hernia for five years She was seized on Feb 20th, 1903 with sudden and severe abdominal pain and she vomited. The bowels were constipated On the 22nd she was admitted to the London Temperance Hospital There was then a tense, tender, irreducible swelling in the left femoral region Sir W Collins decided to operate at once and under chloroform exposure of the sac showed this to have been ruptured some sanious fluid escaping A portion of small intestine was tightly strangulated in the femoral ring A director was with some difficulty and with great care inserted under Poupart's ligament and the latter was freely divided It was then seen that only a portion of the enteric cylinder was involved The strangulated portion was purple in colour and œdematous and was defined by a greyish line from the unsnared portion Sutures passed through the outer coats of the sound gut were employed to fix it to the surrounding ligaments and *fascia so as to leave the engaged intestinal area facing* the surface and excluded from the peritoneal cavity The gut was well greased [illegible] left open, lightly pack [illegible] but uncomplicated. [illegible] gut occurred. *The stitches were removed on March 4th The* site of the wound became puckered during cicatrisation as the gut, resuming its duties, became drawn up into *the abdomen, though doubtless leaving an adhesion around* the femoral ring The patient was discharged well on March 26th

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WESTERN INFIRMARY, GLASGOW

NOTES OF SOME SURGICAL CASES

(Under the care of Dr J CRAWFORD RENTON)

FOR the notes of the cases we are indebted to Dr G Rutherford Jeffrey

CASE 1 *Rupture of the kidney, nephrectomy* —The patient, a man, was admitted to the Western Infirmary, Glasgow, having fallen down the hold of a ship and sustained a severe injury in the right lumbar region The pain was intense over the right kidney and his pulse was feeble In a few hours he had rallied from the shock and passed a considerable quantity of bloody urine The blood gradually disappeared and the temperature and pulse continued normal until the morning of the tenth day when he was seized with sudden hæmorrhage from the bladder without apparent cause and profound collapse Dr Jeffrey saw him at once and injected saline solution into both axillæ and at 9 15 A M , shortly before which time the hæmorrhage had taken place, the kidney was exposed and removed It was almost split in two and lacerated and the amount of hæmorrhage round about it was considerable Its pedicle was tied with silk and it was grasped in addition with a curved metal clamp, this being removed in four days He progressed favourably until the eighth day, when his temperature rose to 104° F and it was quite evident that there were still some clots in the bladder, as shown by the fact that he was passing a small amount of blood in the urine In these circumstances suprapubic cystotomy was performed and the bladder was washed out. He *progressed favourably and* is now quite well and is passing 46 ounces of urine daily

CASE 2 *Nephrectomy for calculous pyelitis* —Dr R. Jardine sent a married woman, from whose left kidney a stone was removed by Dr Renton three years ago from which operation she completely recovered, a year afterwards had again a small calculus removed and as she still continued to suffer from the chronic pyelitic condition which is induced by calculi at her earnest request her kidney was removed , it contained several other calculi She progressed favourably and is now quite well

CASE 3 *Nephro lithotomy* —The patient, a male, was admitted into the Western Infirmary, Glasgow, with a history of left renal colic which had occurred on several occasions during the last three years He had been under the care of Dr R. Spence of Burntisland and latterly was seen by Dr W F Somerville who sent him to the infirmary *on account of urgent pain He had never passed blood in* his urine. A Roentgen ray photograph showed the distinct outline of a calculus in the substance of the kidney Nephrotomy was therefore performed and the calculus was *removed Only a tiny portion of* it protruded into the pelvis of the kidney and the rest had to be enucleated out of its substance

CASE 4 *Osteotomy for faulty ankylosis* —A boy, aged 15 years, was sent by Dr A N Montgomery with his knee joint ankylosed at a right angle This had existed for several years A wedge of bone was removed from the knee and the limb was straightened Union in a straight position was complete and the patient now walks about with an O Connor extension boot, requiring neither crutch nor stick to assist him although his right leg is six inches shorter than the other

CASE 5 *Three operations for intestinal obstruction in the same patient* —The patient, a male, was operated on in [illegible] and a month [illegible] to a band [illegible] the ileum. Studded over the peritoneum were a large number of tuberculous nodules He recovered and went home. In October, 1902, Dr T McG Fletcher telephoned that he was again suffering from obstruction and on opening his abdomen a coil of bowel tightly constricted was found , the adhesions were divided and from this he recovered The tubercle had disappeared A fortnight after he was again seized *with symptoms of obstruction due to a portion of bowel* being constricted and gangrenous; this was removed and he left the infirmary quite well, having been operated on three times for obstruction of the bowels, a very uncommon experience.

CASE 6. *Burst appendix and intestinal obstruction.*—A girl, aged 12 years, was sent by Dr. W. Duff of Wishaw to have her appendix removed. The night after she arrived she was seized with symptoms of rupture of the appendix which was at once removed. Ten days afterwards she had an attack of acute obstruction due to a portion of bowel being constricted by a band; this was divided and she recovered. She had previously had three attacks of appendicitis.

CASE 7. *Paralysis of the face; operation; recovery.*—A girl, aged 14 years, was sent by Dr. A. McLelland of Alexandria, Dumbartonshire, with a history of discharge from the ear for three and a half years and of paralysis of one side of the face for three years, tenderness over the mastoid region, and with an increased pulse-rate and temperature. The patient was somewhat drowsy. The mastoid antrum was opened and pus was evacuated. When the acute symptoms subsided the mastoid and tympanum were converted into one cavity, according to the method recommended by Mr. C. A. Ballance, and when covered by granulation tissue skin grafts were applied to effect complete healing and cessation of discharge. A month after the operation the paralysis had completely disappeared and the patient was using her muscles the same as formerly.

Remarks by Dr. RENTON.—Case 1 is of interest as illustrating the fact that a badly ruptured kidney may improve temporarily and then have a recurrence of hæmorrhage. When such does happen the only chance for the patient is operation. Case 5 is interesting as showing the complete disappearance of the tuberculous nodules noted at the first operation. Case 6 and several others seem to illustrate the importance of operating after one attack in suitable cases, as every recurrence means additional adhesions being formed and greater danger of obstruction taking place. Case 7 is a striking illustration of how quickly muscles which have been paralysed for three years recover. No electricity was employed to effect this, so that the benefit must be entirely ascribed to the facial nerve being relieved from inflammatory pressure caused by the chronic inflammation in the tympanum.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Multiple Aneurysms of the Splenic Artery associated with Calcification of the Portal Vein.—Primary Sarcoma of the Heart.—Acute Leukæmia with a Scheme of Classification of Leukæmias and Pseudo-leukæmias.—A New Method of Blood-counting.—Cirrhosis of the Liver in an Infant.—Plexiform Neuroma of the Orbit.

A MEETING of this society was held on May 19th, Mr. R. J. GODLEE, Vice-President, being in the chair.

Dr. R. S. TREVOR showed a specimen of Multiple Aneurysms of the Splenic Artery associated with Calcification and Dilatation of the Portal, Splenic, and Mesenteric Veins. The specimen was found post mortem in the body of a man, aged 53 years, who died from loss of blood consequent upon ulceration of the bowel. The man had been admitted into St. George's Hospital for the radical cure of an old hydrocele and no disease was suspected until the operation was performed, when a great tendency to hæmorrhage was noticed. On the following day much enlargement of the spleen was detected and the edge of the liver was felt below the costal margin. At the necropsy, in addition to the condition of the splenic vessels, a very large spleen and a cirrhotic liver were found together with signs of old syphilis. After discussing the relationship of chronic adhesive pylephlebitis to cirrhosis of the liver, Dr. Trevor stated that the vascular disease and the cirrhosis might be explained as the indirect result of a syphilitic toxin. At the same time it was thought that in spite of the absence of a blood examination there was much to be said in favour of the case having been one of Banti's disease implanted on a syphilitic soil. The tendency to hæmorrhage, the large spleen which weighed more than the liver, and the wide meshed cirrhosis formed by narrow bands of fibrous tissue, as well as the histological appearances of the spleen and the chronic endophlebitis of the splenic and portal veins, all agreed with Banti's description. The aneurysms on the splenic artery were the outcome of a syphilitic degeneration affecting the vessel in its least supported area.

Dr. J. H. DRYSDALE read an account of a case of a woman, aged 43 years, who died from Sarcoma of the Heart. She had had an attack of rheumatism 15 years previously and since her last confinement, about 14 days before admission to hospital, her general condition had become bad. When admitted she was collapsed and breathing was difficult. The heart sounds were irregular and feeble but no murmur was detected. She died three days after admission. At the necropsy the two layers of the pericardium were everywhere adherent but could be easily separated. At the root of the aorta there was a distinct mass of whitish new growth. The parietal pericardial layer was everywhere infiltrated and in places it was nearly a quarter of an inch thick. The muscular walls of all four chambers were infiltrated with new growth. The aorta and pulmonary arteries were surrounded by new growth. Microscopical examination showed the growth to be a sarcoma. In the section of the pericardium the growth had an alveolar structure but this was due to the nature of the tissue infiltrated as the appearance was quite absent in the growth which occurred in the glands and the lung. Dr. Drysdale considered it impossible to be certain where the growth originated, whether in the heart or the pericardium, but the mass in the wall of the right ventricle and ventricular septum was the largest and probably the primary growth.—Dr. H. M. FLETCHER asked if any reference to specimens of a similar nature had been found. He considered that the specimen was one of extreme rarity. He thought that the growth probably arose from the visceral pericardium and the structure of the growth resembled an endothelioma rather than a sarcoma.—Dr. DRYSDALE replied that he did not consider that the growth resembled in structure that seen in endothelioma and he was of opinion that it was a primary sarcoma originating in the walls of the heart.

Dr. F. PARKES WEBER read a paper on a case of Acute Leukæmia and on the Classification of Leukæmias and Pseudo-leukæmias. A very anæmic man, aged 49 years, with a purpuric eruption, swollen gums and tonsils, and enlargement of the spleen, liver, and all the lymphatic glands, was admitted into hospital in a semi-delirious condition with slight fever. He died on the following day, about two months from the commencement of his illness. The blood in the heart after death had a peculiar brownish-pink appearance as if mixed with milk and showed an enormous proportion of white cells of which 92·7 per cent. were large or small lymphocytes. The bone marrow in the shafts of the long bones had a creamy brownish-red colour. Microscopical examination of the bone marrow, spleen, lymphatic glands, liver, and of a whitish patch in one kidney showed that all these tissues were permeated with colourless cells, most of them of the lymphocyte 'class' but many of them containing granules (more or less eosinophile) and apparently belonging to the myelocyte class. Dr. Parkes Weber preferred the hyperplasia-like tumour-formation theory of leukæmias. He regarded "acute leukæmia" as a more primitive or less differentiated type of disease than the more chronic forms of lymphatic leukæmia, but doubtless there was no hard-and-fast line to be drawn between them. Microbic infection was often a complication. Typical "spleno-medullary leukæmia" was probably the "most highly differentiated" form of leukæmia. Mere "mechanical" theories (cells overflowing or being squeezed out into the blood stream) were insufficient to account for the differences between leukæmias and pseudo-leukæmias.

Dr. W. M. STRONG and Dr. C. G. SELIGMANN communicated a note on a New Method of Counting the Corpuscles of the Blood. They stated that by the following method they had been able to obtain permanent preparations from which the number of red and white cells could be counted at any period subsequent to the time at which the blood was taken, while the use of any form of counting chamber was done away with. Five cubic millimetres of blood were diluted a hundred-fold with a fixing solution containing methyl violet. For the white cell count five cubic millimetres of this mixture were blown on to a slide from a pipette graduated to deliver this quantity. The drop was allowed to dry and was mounted in Canada balsam in the usual way. When such slides were examined with a $\frac{1}{6}$-inch objective the white cells were seen to be stained a conspicuous blue among the unstained red corpuscles. The former were counted by going over the whole of the dried-up drop with the aid of a mechanical stage. Then knowing the dilution of the blood the number of white cells per cubic millimetre could be readily calculated. For the red cell count a further dilution of the first hundred-fold dilution was made into a solution containing eosin. Five cubic millimetres of this were placed on a slide, dried, and mounted in Canada balsam From the total number of red cells present in the film formed by the dried-up drop the total number of red cells per cubic millimetre was calculated. Dr. Strong and Dr. Seligmann stated that as the outcome of considerable experience in the clinical laboratory of St. Thomas's Hospital, where the method had for some time been in daily use, the results obtained by this method did not differ appreciably from, nor take longer in obtaining than, those given by counting with a Thoma Zeiss slide.

Mr. L S. DUDGEON read an account of a case of Enlargement of the Liver in a child, aged nine months, who died after four days' illness from broncho-pneumonia. The temperature was subnormal (from 84° to 94° F.) during the illness. There were well-marked evidence of rickets and enlargement of the liver but no jaundice. The kidneys were normal. No other abnormal changes were manifest. The liver was very firm, yellow-coloured, with white patches through its substance. Large areas of fibrous tissue having a unilobular distribution were present in the bile-ducts in large numbers. Dr. H. D. Rolleston considered the specimen to be one of congenital cystic disease of the liver.—Dr. H. BATTY SHAW quoted the case of a child who was subject to periodic rises of temperature and was also anæmic. One week before death the child developed ascites and œdema of the legs. At the necropsy the liver did not appear to be abnormal but on microscopical examination the specimen exhibited the same appearances as those shown by the specimen exhibited by Mr. Dudgeon.—Dr. W. S. LAZARUS-BARLOW said that he had seen a similar specimen and believed it to be congenital cystic disease of the liver; the absence of congenital cystic disease of the kidneys did not negative the fact that the specimen was one of congenital cystic disease. He suggested that congenital cystic disease of the liver was a special form of adenoma of the liver.—Dr. PARKES WEBER thought that it was generally recognised that congenital cystic disease was a special form of adenoma.

Mr. J. HERBERT PARSONS and Dr. W. C. ROCKLIFFE reported a case of Plexiform Neuroma (Elephantiasis Neuromatodes) of the Orbit. The child, aged two years, was shown at a meeting of the Ophthalmological Society in 1899 as a case of pulsating exophthalmos. The proptosis increased gradually without much affecting the child's general health, but finally interference became necessary and Dr. Rockliffe exenterated the orbit in January, 1903, after tying the carotid artery. The child died very shortly after the operation. At the post-mortem examination it was found that the roof of the orbit had been absorbed and that the growth had become intracranial, leading to great distortion of the bony and soft parts. On microscopical examination it was found to consist of convoluted hypertrophied nerves imbedded in dense fibrous tissue. These filled the orbit, extending backwards into the skull and forwards into the posterior part of the upper lid, leading to ectropion. Cases of elephantiasis neuromatodes involving the upper lid and temporal region formed a large proportion of cases of the disease but affection of the orbit was rare and this was the most extensive case on record.

DERMATOLOGICAL SOCIETY OF LONDON.—A meeting of this society was held on May 18th, Mr. Malcolm A. Morris being in the chair.—Dr. E [illegible] 1. A case of possible Pemphig[illegible] was a young woman who had be[illegible] Hospital in August, 1902, for a [illegible] the skin and mucous membranes. At this time there was no initial lesion but the whole surface was exuding serum. After a few days the skin began to dry up and desquamated very freely. She became [illegible] for a time, but finally [illegible] her return to health was [illegible] and a suppurative tonsillitis. Soon after this another attack of the exfoliative skin eruption occurred, but on the subsidence of this she was well enough to be discharged. She attended the out-patient department from this time and occasionally exhibited some small bullæ on the chest, while there was a constant exudation from the axillæ, though true bullæ were never found on them. In April last she was admitted on account of a new attack of the erythematous eruption and was then found to be in a very bad condition. Exfoliation again occurred soon after admission and when brought to the society she showed an extensive peeling of the hands and a little on the face, arms, and legs, which were of a much darker colour than normal. Most of the skin was then healthy and the patient's condition, although very bad, did not seem to be in direct proportion to the severity of the skin lesions. Many of the members considered the case to be more probably erythema scarlatiniforme recidivans. 2. A man suffering from Simultaneous Eruptions of Psoriasis with a Follicular and Ecthymatous Syphilide. 3. A child with Lupus of the Nose and Lichen Scrofulosorum of the Body.—Dr. D. B. Lees (introduced) showed a case of Asphyxia Reticularis Multiplex.—Dr. W. J. Freeman showed a girl suffering from a peculiar Rash on the Ulnar Surfaces of the Forearms and on the Inner Sides of the Thighs. The eruption, which was slowly extending, consisted of large retiform patches made up of slightly infiltrated and scaly papules not unlike those of lichen planus, but differing in their smaller degree of prominence and in their mode of onset. The case had been shown to the society before under the diagnosis of parakeratosis variegata and this diagnosis was accepted by all the members.—Dr. J J. Pringle showed a man with Peculiar Ulcerating Infiltrations on the Face. He was a countryman from Wales and the disease had begun on the right ear in September, 1901. The earlier lesions had been destroyed with caustics but new ones had appeared and he now showed four such growths, on the right cheek and in the centre and on both sides of the chin respectively. The growths appeared to be of a granulomatous nature and on careful examination could be seen to be studded with minute pustules. Dr. Pringle said that he had not yet had the patient under observation long enough to carry out any microscopic examination, but that he considered it not unlikely that the disease might turn out to be a case of blastomycosis —Dr. E. Stainer showed a man suffering from Mycosis Fungoides, who had been brought to the society before, to show the result of x-ray treatment. The exposures and the quality of the tubes used had varied in different cases and some burning had taken place but it was all over at the time of exhibition. It was satisfactory to note that in every instance the exposures had been followed by complete disappearance of the tumours, so that for the time, at any rate, the man apparently was free from the disease.—Dr. J. Galloway showed: 1. A patient with a Marginate Erythematous Eruption covering the trunk and limbs and having a fine vesicular edge, while the centre, where resolution had taken place, was marked by deep pigmentation. The patient had been seen previously with an eruption indistinguishable from an ordinary pemphigus and partly on this account and partly from the course of the eruption he made the diagnosis of dermatitis herpetiformis. 2 A case of Exuberant Papillomatous Syphilide.—Dr. J. H. Stowers showed: 1. A woman with Paget's Disease of the Nipple whom he had brought to the society before on account of the long duration (15 years) without the complication of malignant disease of the breast. Carcinomatous nodules had now within the last 12 months developed in the breast and the axillary glands had become infected. 2. A boy, aged 15 years, with well-marked Herpes Iris from which he had suffered several times a year for nine years.—Dr. J. H. Sequeira showed a girl who had a deeply seated Linear Eruption running round and just beneath the horizontal ramus of the right side of the jaw. The history pointed to its resulting from trauma at nine years of age from which it slowly spread, but there was reason to doubt its being lupus. The alternative diagnosis offered was a nævoid growth.—Dr. H. Radcliffe Crocker showed a female patient suffering from Mild Pityriasis Rubra Pilaris, together with a drawing showing her previous condition.—Dr. A Whitfield showed a man suffering from Multiple Tuberculous Affections of the Skin and Eyes. The patient had had a sharp febrile attack in August, 1902, and shortly after had noticed two patches on his face, on the upper lip and chin respectively. Soon after he had trouble with his eyes and this was found to be tuberculous iritis. When exhibited he showed two patches of lupus on the upper and lower lip and very numerous nodules of erythema induratum on the fronts and backs of both legs. The face was being treated by "the light" and the legs by ointment and bandaging. The eyes were reported to have almost returned to the normal and the other lesions were slowly improving.

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM.—A meeting of this society was held on May 2nd in the Medical Institution, Liverpool. Mr. C. A. Ballance, vice-president, took the chair for the first half of the meeting and then vacated it in favour of Dr. H. E. Jones.—Professor Andrew M. Paterson described the Development and Morphology of the Temporal Bone together with the Mode of Evolution of the Ear. First there was an invagination of the surface epiblast connected with the brain and communicating with the surface (elasmobranchs) Then there was a complete severance of connexion with the surface (bony fishes); then there was the formation of tympanic cavity, membrana tympani, stapes, and columella (reptiles and birds); then there was the addition of branchial elements, malleus and incus, external meatus, and pinna (mammals). The complexity and interest of this evolution were increased by the occurrence of the mastoid antrum, the mastoid process, and the cells. The spiral cochlea of mammals presented an obscure and interesting question. The branchial apparatus took a very secondary share in the formation of the ear and this only in mammals.—Dr. Herbert Tilley cited a case in which a temporal bone seemed to have no mastoid antrum.—Dr. Alfred W. Campbell read a paper on the Cortical Centre of the Auditory Nerve. He stated that in a suitably stained section taken from the middle of the temporal lobe of the brain three definite types of cortical structure might be observed and by careful study of these in successive series it was possible to define with absolute exactitude two definite areas—namely (1) the transverse temporal gyri of Heschl and (2) the posterior three-fifths of the superior temporal convolution. From anatomical, embryological, experimental, and clinico-pathological data he believed that the first area represented the arrival platform for the primary reception of auditory stimuli, while the second represented that part of the cortex which interpreted and elaborated these stimuli. Histological, developmental, and clinico-pathological facts were adduced in favour of these areas having the functions assigned to them. The fact that a lesion in the left hemisphere did not produce complete "word-deafness" seemed to show that the right hemisphere shared the function but to a less degree. Dr. Campbell's histological researches showed no differences between the auditory areas in the two hemispheres and hence he could say nothing about the exact localisation of a "word-hearing" centre.—Dr. Jones read a paper in which he pointed out various relationships of the facial nerve which would enable a surgeon to avoid injuring this nerve during an operation and this without having recourse to any of the numerous measurements which had been laid down from time to time and which were of little value when once an operation had been commenced and landmarks were thereby destroyed.—Mr. A. H. Cheatle read a paper on Quinine Deafness and its Prevention. He said that anæmia was probably the pathological cause of the deafness produced by overdoses of quinine. Once established the deafness was permanent and without remedy; hence the treatment must be preventive. Medical men and others, especially in malarial regions, should be warned of the evil effect which large doses of quinine might have upon the hearing. When quinine was given it should be guarded by full doses of hydrobromic acid.—Dr. Thomas Barr said that he thought that the effect of quinine was especially marked in people whose hearing was already deficient.—Dr. William Milligan said that he had found nitrites of use in the treatment of quinine deafness probably on account of their relieving the anæmia.—Dr. J. Dundas Grant said that he believed that the evil effects of quinine were due to congestion —Mr. C. G. Lee showed a case of Extradural Abscess following Acute Otitis Media. The radical operation was done with complete success and one drachm of pus was evacuated from an extradural abscess in the middle cerebral fossa. Convalescence was retarded by an attack of erysipelas but the patient made a complete recovery.—Dr. Milligan showed a case in which eight days after radical operation had been performed for the cure of chronic suppurative otorrhea skin grafting was carried out, but no packing had been used and yet a perfect result had been produced. He also showed a second case in which the antro-tympanic cavity had been packed for five weeks after the complete operation. An equally successful result had been obtained.—Other cases and a variety of specimens were shown by Dr. William Permewan, Mr. E. M. Stockdale, Dr. Philip Nelson, and Dr. Jones.

HARVEIAN SOCIETY OF LONDON.—A meeting of this society was held on May 7th, Dr. W. Winslow Hall, the President, being in the chair.—Mr. T. Crisp English read a paper on Some Points in the Diagnosis of Acute Abdominal Cases. Attention was drawn to a stage occurring shortly after the onset and marked by the diminution or cessation of all acute symptoms. If, as frequently happened, the patient was first seen during this quiescent period a serious view might not be taken of the case and fatal delay might follow. The effect of stimulants in producing temporary improvement in the patient's condition and in masking the symptoms was pointed out, the action of morphia in this respect being universally known. Large doses of brandy and strychnine intensified the quiescence of symptoms after recovery from the initial shock. Quickness of the pulse, associated with a falling or subnormal temperature, was a symptom of special importance. Diminution or absence of liver dulness, as evidence of free gas in the peritoneum, was of most significance when occurring in the mid-axillary line, or when found shortly after the onset of symptoms in a contracted and board-like abdomen. The various conditions giving rise to this sign were discussed. Leucocytosis in the diagnosis of acute peritoneal lesions was of theoretical rather than of practical value and in many cases might be positively misleading. Perforated gastric ulcer or appendicitis was sometimes closely simulated by certain acute symptoms which appeared shortly before the onset of the menstrual period.—Mr. Edmund Owen said that the custom of admitting cases of intestinal obstruction into the medical wards of hospitals as a matter of course was now happily dying out and physicians were becoming more ready to call in surgical aid. All hernial orifices ought to be examined in cases of abdominal obstruction.—Dr. Sidney P. Phillips mentioned several conditions which simulated intra-abdominal disease.—Mr. P. L. Daniel read a paper on Gastro-enteritis of Obscure Origin simulating, and surgically treated as, Peritonitis. He said that enteritis with or without gastritis might in adults produce such intense collapse, with abdominal symptoms but without diarrhœa, as to suggest peritonitis and to cause operations to be performed for the relief of supposed perforation. He read notes of three cases, on two of which laparotomy was performed, while the third patient died 24 hours after the onset of the symptoms; he also read the post-mortem record of the two fatal cases. The lesions in these patients were those of acute gastro-enteritis, the origin of the process in one case seeming to be a septic state of the gums. He thought that the condition was due not to the bacillus coli communis nor to the bacillus enteritidis but to micrococci introduced from above—namely, from the mouth, nose, middle ear, or œsophagus. The misleading feature in these cases was undoubtedly the absence of diarrhœa. The diagnosis was rendered possible by the history of chronic gastric trouble and by the following facts: (1) the presence of some focus of suppuration in the upper alimentary or respiratory tract; (2) the presence of distressing thirst; (3) the great amount of mucus in the vomit and the not infrequent presence of blood; (4) the presence of marked hyperæsthesia in the epigastrium and about the umbilicus without proportionate pain on deep palpation; (5) the absence of muscular rigidity in the abdominal wall; (6) the absence of the characteristic facies and attitude of peritonism; and (7) the fact that the intestinal obstruction which was simulated was not absolute. The treatment suggested was: (1) the removal of any suppurating and septic foci; (2) the administration of large quantities of bland fluid such as egg albumin or barley water, but not milk; and (3) the subcutaneous injection of two pints of 2 per cent. glucose solution if the collapse did not pass off with the usual remedies.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—A general meeting of this society was held on May 8th, Dr. V. H. Wyatt Wingrave, the President, being in the chair.—Mr. W. J. Chichele Nourse showed a case of old-standing Lupus of the Larynx which had required tracheotomy in an elderly woman.—Dr. W. Jobson Horne inquired if in this patient there were any evidences of tuberculous disease in the lungs or elsewhere and Mr. Nourse replied in the negative.—Mr. Nourse also showed a case of Tertiary Syphilis of the Larynx in a managed 51 years. Treatment on the usual lines had resulted in a very satisfactory recovery.—The President congratulated Mr. Nourse on the quick response to treatment in this case.—Mr. E. D. Vinrace remarked on the very complete recovery obtained.—The President showed a case of Lupus of the Nose, Palate, and Larynx in a girl.—Dr. W. H. Kelson showed a case of Laryngeal Fistula.—Mr. Vinrace remarked that in this case the arytænoid eminences when viewed directly through the fistula were really larger than they appeared to be in the mirror.—Mr. Nourse showed a case of New Growth on the Nose externally presenting an unusual structure.—The President (who exhibited a microscopical specimen of the growth) regarded this growth as extremely rare pathologically. It might be described as a "papillary adenoma," innocent in its nature, and originating probably in the duct of a sweat gland or an aberrant "rest."—The President showed: (1) specimens illustrating the Histology of the Accessory Sinuses; and (2) a specimen of Ceruminous Gland of the External Auditory Meatus.—Dr. Horne showed macroscopical and microscopical preparations illustrating Endotheliomata of the Upper Air Passages.—Dr. J. Dundas Grant inquired of Dr. Horne the clinical appearances of one of the growths shown which had affected the larynx and its duration.—Dr. Horne, in reply, stated that this particular growth had existed for over two years and that in appearance it was a fungating, breaking-down growth like a malignant tumour.—Dr. Kelson asked for a definition of the recently much-used word "endothelioma" and inquired as to the behaviour of such a growth.—Dr. Horne regarded the endothelioma as of local malignancy; it would recur locally if removed.—Dr. L. H. Pegler inquired whether formalin had been used in the preparation of the specimens shown and Dr. Horne replied in the affirmative.—The President remarked about these endotheliomata that some were of rapid growth while others increased but slowly. They were like malignant tumours certainly and were not papillomatous in nature as they grew down deeply into the tissues.—Dr. P. H. Abercrombie showed (for Dr. W. G. Holloway) a case of Hypertrophy of the Lingual Tonsil in a woman, aged 28 years. It was proposed to remove the swollen part with the curved tonsillotome.—Mr. Vinrace and Dr. Horne were against operation in this case as likely to be followed by hæmorrhage.—Dr. Kelson suggested the possibility of a foreign body as a cause for the swelling and redness of the lingual tonsil.—The President and Mr. Nourse joined in the discussion.—Mr. Nourse exhibited (1) a new form of Infundibular Probe and Cannula for the Frontal Sinus; and (2) a Probe and Cannula for the Sphenoidal Sinus.—Mr. Nourse read the notes of the sequel of a case of Gumma of the Larynx shown about a year ago. The patient had died from thoracic aneurysm.—The President described a slight Modification of Moure's Operation applicable to children. The method consisted in the placing of an Adam's clamp in the nostrils after the septal incisions had been made and the deviation had been rectified. The clamp acted as a splint and tended to arrest bleeding.—Dr. Pegler having spoken, the President replied.

Glasgow Northern Medical Society.—This society held its usual monthly meeting on April 7th in the Ophthalmic Institution, Glasgow, Dr. J. S. Muir, the President, being in the chair.—Dr. A. Maitland Ramsay, with the assistance of his staff, gave a series of demonstrations with special reference to Diseased and Injured Conditions of the Eye. As there were several patients present by arrangement these were shown first and their conditions were explained. The first class of cases referred to an operation for ptosis. The operation which had been performed was a modification of that by Mules. The advantage of it was that if it were not successful it could be easily done again and it left very little scar, if any. The upper lid was suspended on a loop of wire which remained permanently in the tissues. The next class of cases calling for attention consisted of three patients for whom paraffin stumps had been supplied after enucleation. The great difficulty with the artificial eye was the sunken, flat, and dead-like appearance of it. The operation described went a good way to overcome that drawback. When liquid paraffin was injected into the capsule of Tenon the artificial globe in front could move about and it was very difficult to detect that it was artificial. Another class of cases of considerable psychological interest was demonstrated in which sight had been restored after many years of more or less total blindness. In one case a dark dislocated lens had been found blocking up the pupil and was removed, after which the patient had good vision. Several preparations, including cultures and microscope slides, were shown demonstrating the bacteriology of the conjunctiva and arranged by Dr. J. C. McClure, bacteriologist to the institution.—The electric room was then inspected where Dr. John Gilchrist explained the various apparatus, including the x-ray appliances.—Dr. Ramsay afterwards delivered a lecture on Iritis in the class-room. The clinical features were illustrated by hand-painted coloured slides, while the pathological aspect was clearly demonstrated by means of microscopic specimens thrown on the screen by the projection microscope. It was thus possible to have two pictures shown at once.

Aberdeen Medico-Chirurgical Society.—A meeting of this society was held on May 7th, Dr. J. Gordon, the President, being in the chair.—The following clinical cases were exhibited:—Dr. J. F. Christie: (1) Two cases (brother and sister) of Ichthyosis; (2) a case of Urticaria Papulosa going on to Prurigo; and (3) Photograph of a peculiar Syphilide.—Dr. J. Marnoch: (1) A patient with Arrested Development of the Mandible; (2) Radical Cure of Inguinal Hernia in a man, aged 73 years; (3) a patient operated on 18 months ago for Chronic Ulcer of the Stomach; (4) a case of Posterior Gastro-enterostomy for Cicatrised Ulcer of the Stomach; and (5) a case of Intra- and Extra-Peritoneal Rupture of the Bladder successfully operated on.—Dr. J. Scott Riddell: (1) A case of Abdominal Tumour, probably lipoma of the omentum; (2) a patient after Removal of Tuberculous Glands from the Mesentery; (3) a patient in whom Burrell's Operation for Recurrent Dislocation of the Shoulder had been performed a year before; (4) a case of Coxa Vara with Skiagram; and (5) a case of Congenital Dislocation of the Hip treated by the method of Lorenz.—Dr. G. Rose: (1) A case of Resection of the Knee-joint; and (2) a case of Acute Diaphysitis of the Femur.

West Kent Medico-Chirurgical Society.—The seventh meeting of the forty-seventh session of this society was held on May 1st, Dr. George Herschell, the President, being in the chair.—In his address from the chair on the subject of the Diagnosis of Cancer of the Stomach in the Early Stage the President, after enumerating the symptoms met with in the early stage of cancer of the stomach, pointed out that none of these were distinctive, although persistent anorexia was a sign which was very often met with. In his opinion the most valuable signs were to be obtained by the examination of tiny fragments of mucous membrane of the stomach procured by Hemmeter's method of curettage of the stomach by means of a rubber stomach tube with unbevelled eyes. The conditions which should make the practitioner suspect malignant disease of the stomach, were the proliferation of epithelial cells through the membrana propria and between the glands, fission of the gland tubules, the atypical shape of the glands, and the presence of cells the nuclei of which were undergoing atypical mitosis.

Plaistow and Canning Town Medical Society.—A meeting of this society was held on April 29th.—
[illegible] the Heart.—Dr. W. M. D.
[illegible] le Abscesses.—Mr. P. Rose
[illegible] an Infant; it weighed 46
[illegible] at as a result of a com-
[illegible] ountry Holiday Fund that
[illegible] small honorarium to the
medical men who undertook the duties of examining the children.—Mr. L. S. Dudgeon, who was present by special invitation, then gave an address on Tuberculosis of the Serous Membranes, dwelling particularly on the conditions of tuberculous pleurisy, tuberculous meningitis, and tuberculous peritonitis.—After a little discussion the meeting terminated with a vote of thanks to Mr. Dudgeon.

Colchester Medical Society.—The spring meeting of this society was held on May 12th, Dr George Brown being in the chair.—The following resolution was carried regarding the late President, Mr. R. F. Symmons.

> This meeting desires to express its heartfelt sorrow at the loss which the society has sustained by the death of Mr. R. F. Symmons who was a member for 42 years. His high sense of honour, his unvarying kindness, and his earnest desire to promote goodwill among his professional brethren were qualities much appreciated by this society.

Dr. W. W. Sinclair of Ipswich showed specimens of Tumours of the Eye.—Dr. Beaumont Percival read a paper on Curettement, its uses.—Dr. B. H. Nicholson showed (1) an Osteoma of the Upper Jaw (the patient was shown); (2) a case of Coxa Vara; (3) a specimen of Gangrenous Appendicitis; and (4) Acute Necrosis of the Diaphysis of the Ulna

Reviews and Notices of Books.

The Blood: How to Examine and Diagnose its Diseases. By ALFRED C. COLES, M.D., B.Sc. of Public Health, Edin. Second edition. With six Coloured Plates. London: J. and A. Churchill. 1902. Pp. 286. Price 10*s.* 6*d.*

IN our review of the first edition of this work we explained its object and scope and expressed the favourable opinion which we had formed of it. We may now congratulate the author on the satisfactory reception which his book has met with—a reception which has justified his belief that a small book dealing particularly with the practical methods of, and the clinical deductions to be obtained from, the examination of the blood would prove of service. The importance of the subject is now generally recognised and since the appearance of the first edition much work has been done by many observers with respect to the examination of the blood and the changes in the corpuscular elements in disease. Dr. Coles has taken advantage of such researches and has brought the present edition up to modern requirements by a thorough revision of the work and the addition of much new matter.

The section on Malarial Parasites has received particular attention. Much discussion has taken place concerning the best method suited to the recognition of these organisms. Dr. Coles describes in great detail the technique of a method of examining the blood which he deems best suited to meet the requirements of physicians—viz., a process insuring rapidity and certainty and one which introduces the fewest possible errors. Those practitioners who are likely to be brought into contact with malarial cases will do well to study carefully the pages devoted to this subject, as an examination of the blood is now acknowledged to be of great assistance in doubtful cases.

Dr. Coles also gives directions as regards examining the blood for the embryo filariæ. If permanent preparations are required he advises that a film should be procured which is very thin at one end and moderately thick at the other; this film should be fixed in alcohol and ether and stained with eosin and hæmatoxylin. By this means the internal structure and sheath of the parasite are well shown, and in the thin part of the specimen the nature of the leucocytes can also be ascertained.

Muco-Membranous Entero-Colitis. By MAURICE DE LANGENHAGEN, M.D., Consulting Physician at Plombières, Vosges, France. London: J. and A. Churchill. 1903. Pp. 115. Price 3*s.* 6*d.*

THIS little volume contains a very good description of the disease known as muco-membranous entero-colitis. As the affection has not received the attention which it merits in most medical text-books, Dr. de Langenhagen's remarks will be found very interesting. A clear description is given of the principal symptoms of the disease, of which the three most characteristic are a glairy secretion from the bowels which is more or less formed into pseudo-membranes, the irregularity of the intestinal functions, and abdominal pains of a special character. These phenomena are considered in detail and the reader is presented with a good clinical picture of the malady. Dr. de Langenhagen points out that patients suffering from the disease "never possess what may be called intestinal equilibrium." As a general rule, he says, constipation prevails; in rare cases there exists a true form of diarrhœa which persists throughout the course of the affection. These exceptions, however, do not invalidate the statement that "muco-membranous entero-colitis is an enteritis typified by constipation." Food, however, is often discharged imperfectly digested. Green vegetables such as cabbage and spinach, French beans, green peas, carrots, and those vegetables made into salads are passed almost unchanged in appearance. Fats, too, are hardly ever digested. Upon these indications the treatment is mainly founded. The affection, though prolonged and difficult to control, can always be considerably relieved and sometimes completely cured by therapeutical means chosen with discernment and employed with perseverance. The question of diet is of supreme importance. The problem consists in nourishing the patient in such a way that the stools shall be neither abundant nor irritating. Dr. de Langenhagen's remarks on this part of the subject are very full and lucid and will be found easy to act upon in practice. He naturally lays stress on hydro-therapeutic measures. The regimen which a patient has to follow when placed under proper supervision is of the greatest benefit and excellent results have been obtained.

With regard to the etiology of the disease, Dr. de Langenhagen is of opinion that muco-membranous entero-colitis occurs much more frequently than is generally supposed and he thinks that it should be considered a "constitutional malady." He believes that certain persons are predisposed "to a sort of laxity of the tissues, a sort of weakening of the intestinal parietes," which will very probably lead to intestinal atony and thence to those more characteristic morbid phenomena which constitute the disease. He has also found that most of his patients are of the "neuro-arthritic" diathesis. We can recommend a perusal of this small work to all those who wish for information on the subject with which it is concerned.

Atlas und Grundriss der Krankheiten der Mundhöhle, des Rachens, und der Nase. Von Dr. L. GRÜNWALD in München. Zweite umgearbeitete und erweiterte Auflage. 42 farbige Tafeln und 39 Textabbildungen. (*Atlas and Essentials of Diseases of the Mouth, the Pharynx, and the Nose.* Second edition, completely rewritten and enlarged. 42 coloured plates and 39 illustrations in the text.) Munich: J. F. Lehmann. 1902. Pp. 212. Price 12 marks.

DR. GRÜNWALD intends this book to act as a preparation for the study and digestion of larger and more elaborate scientific works by students and practitioners of general medicine. But, as Dr. Grünwald rightly contends, a general knowledge can alone be obtained by reading; technique and clinical experience can only be attained by work, conscientiously performed, under the direction and supervision of a competent instructor. For this reason the book is not subject to too minute subdivision of its contents. Also but few instruments are depicted, as they can all be seen by reference to instrument makers' catalogues, and in his preface Dr. Grünwald tells his readers the names of the makers of his instruments.

The first 30 coloured plates are representations of pathological conditions, whilst the last 12 are devoted to reproductions of microscopical sections. This proportion appears to us to be injudicious, especially in view of some of the sections chosen for reproduction, several being allotted to the histological appearances of adenoids. The plates illustrating diseased conditions are both well drawn and well coloured, amongst the most interesting being Plate IV., Fig. 2, a very typical example of pyorrhœa alveolaris; Plate VII., Fig. 1, broken-down gumma of the tongue, and Fig. 2, carcinoma of the tongue; Plate VIII., Fig. 3, diphtheria, not by any means a characteristic example; Plate XII., Fig. 1, an extremely good drawing of carcinoma of the tonsil; Plate XXV., tertiary syphilis of the nasopharynx; and Plate XXVI., hypertrophies of the posterior extremities of the inferior turbinate body, &c.

Dr. Grünwald devotes but little space to a description of the anatomy and physiology of the parts—only 17 pages; he, however, gives quite sufficient to enable his readers to follow any subsequent remarks which touch upon them. He then considers the question of general pathology and examination of the patient with a brief outline of the more usual intra-nasal operations and their indications and he concludes this part with general rules for the guidance of the operator. All acute inflammatory states are taken in sequence, commencing with simple catarrh, the same method being followed in chronic inflammations and specific conditions; also new growths, paralyses, &c., are shortly and clearly reviewed.

Dr. Grünwald is so well known that it is needless to say more than that the book contains a brief summary of the theories and principles so ably advocated by himself, one of the pioneers of nasal surgery. We have no doubt that to those acquainted with the German language this little book will be found useful and instructive. It has the merit of individuality and is devoid of any element of uncertainty in the advice given as to treatment.

LIBRARY TABLE.

First Aid to the Injured and Sick. By F. J. WARWICK, M.B. Cantab., M.R.C.S. Eng., and A. C. TUNSTALL, M.D., F.R.C.S. Edin. Bristol: John Wright and Co. London: Simpkin. 1903 Pp. 236. Price 2*s.* 6*d.*—This is the third edition of a useful little work, the first edition of which we reviewed in THE LANCET of March 2nd, 1901, p. 638. The favourable impression which we then formed of the practical part of the book has in no way altered, but we still think that there is a little too much anatomy and physiology for lay readers. We are glad to see that the authors have enlarged their directions on the lines which we suggested as to the method of releasing sufferers from "live" electric wires. That the book has reached a third edition shows that it has been found useful and we daresay that a fourth edition will soon be called for.

London University Guide and Correspondence Calendar, 1902—1903. London: University Correspondence College. Pp. xx. + 64. Gratis.—This calendar will be found of value by students of the University of London. It gives the regulations for the examinations to be held during 1903 and 1904, with notes and instructions as to how a student may best prepare himself for his examinations.

The Medical Annual, 1903. Bristol: John Wright and Co. Pp. 824. Price 7*s.* 6*d.*—The present is the twenty-first annual issue of this valuable compendium. Medicine and the allied sciences have so enormously widened their scope of late years that it is impossible for any medical man to keep himself posted in advances in his art without the aid of a judiciously selected *précis* of knowledge such as the Medical Annual affords. The contributors to the volume now before us number 34 and all of them are experts in the matters upon which they respectively write. Besides the more purely professional subjects of medicine, surgery, and the like, information is given upon legal decisions affecting medical men, inebriate homes, convalescent homes, sanatoriums for tuberculosis, and many other matters about which medical practitioners constantly want to know. The compilation will be found most useful.

The Municipal Year book for 1903.—Edited by ROBERT DONALD. London: Edward Lloyd, Limited. Pp. 690. Price 3*s.* 6*d.*—This is a book which gives a great deal of information about municipal bodies both in the metropolis and the provinces. A *résumé* is given of Acts of Parliament passed during the session of 1902 affecting local government which will be found valuable We suppose that the publisher is responsible for the irritating way in which advertisements are sandwiched into the body of the book and between the table of contents and the index.

JOURNALS AND MAGAZINES.

The Practitioner.—Malignant Diseases of the Mouth form the subject of a "special" May number of the *Practitioner.* The articles therein contained deal almost exclusively with diseases of the tongue, and a very complete account of epithelioma of the tongue with its natural history and its treatment may be gathered from reading the various contributions of Mr. W. Whitehead, Mr. H. T. Butlin, and other surgeons. The comparatively rare condition of sarcoma of the tongue is dealt with by Mr. A. D. Fripp, C.V.O., whose remarks are based on 29 cases. A prominent feature of most of the articles on carcinomatous growths of the tongue is the urgency with which the writers insist upon the frequency of mistake arising from the fact that epithelioma is often super-imposed upon syphilitic conditions. The great care necessary for early diagnosis and the extreme importance of such diagnosis are well illustrated. The article by Mr. Jonathan Hutchinson, jun., is illustrated by some excellent plates.

Quarterly Medical Journal.—The first of the original articles in the May number of this journal is an elaborate argument in favour of the exogenesis of cancer by Dr. A. T. Brand of Driffield. He uses the word "exogenesis" in the sense of infection from without and with regard to the means by which the pathogenic influences obtain access to the patient's system he says that since the favourite site of epithelial cancer is some part of the mucous membrane the mouth and respiratory passages suggest themselves as very obvious channels. Again, the wearing of long skirts sweeping the ground, together with the open and loose arrangement of their nether garments, suggests another obvious channel of entrance in the case of women, who notoriously suffer from cancer of the generative organs. Mr. G. E. Mould of Sheffield describes What to do in a Case of Recent Insanity, and Dr. E. W. Adams of Sheffield contributes an excellent article on the scientific work and the far-reaching influence of Morgagni

Edinburgh Medical Journal.—The original communications in the May number open with an article on Public Health Administration in Fife during a period of ten years, by Dr. T. G. Nasmyth, medical officer of health of the county. Dr. John Macpherson, Commissioner in Lunacy for Scotland, discusses Insanity in Relation to Fertility, his inferences being drawn from a study of the vital statistics of Ireland for a long series of years. He considers that the great increase of insanity in Ireland is due primarily to the depletion of the population by emigration and more immediately to the growing disinclination for marriage and to the diminution of the Irish birth-rate, which is now among the lowest in Europe, with perhaps the single exception of France. Dr. G. A. Gibson, the editor, publishes the second of his lectures on the Nervous Affections of the Heart.

Scottish Medical and Surgical Journal.—The original articles in the May number are on Trophic Changes the Result of Nerve Injury, by Dr. Alexander James; on the Diagnosis and Treatment of Iritis, by Dr. A. Maitland Ramsay; on the Method of eliciting the "Coin-percussion Sound" in Pneumothorax, by Dr. H. G. Langwill; and on Premature Separation of the Normally Situated Placenta, by Mr. J. S. Ross. A special article on the History and Statutes of the Royal Infirmary of Edinburgh as existing in, or shortly before, the year 1778 abounds in entertaining paragraphs. The "matron or governess" of that day evidently occupied a position of authority which would find favour in the eyes of some of the enterprising "lady superintendents" of modern times. The surgeons' clerk had "to open and inspect dead bodies when desired" and "to electrify those patients for whom electricity is ordered." Another rule directed that "the clerks shall not give any list of the patients, with their diseases, to be published in the periodical magazines or other papers as hath sometimes been done without an application made to the managers and their leave obtained."

Mercy and Truth.—In the May number there is an illustrated account of Mr. Cecil Lankester's medical work at Nathia Gali, a hill station at a considerable elevation in the north-west frontier province of India. In 1902 the Government made arrangements by which the duties of civil surgeon here are carried out by the Medical Mission at Peshawar.

Analytical Records

FROM

THE LANCET LABORATORY.

TABLOID HYPODERMIC STRYCHNINE SULPHATE.

(Burroughs, Wellcome, and Co., Snow-hill-buildings, London, E.C.)

Tabloids containing the following amount of strychnine sulphate are now prepared for hypodermic use: $\frac{1}{30}$th grain, $\frac{1}{40}$th grain, $\frac{1}{60}$th grain, $\frac{1}{100}$th grain, and $\frac{1}{120}$th grain. We have carefully assayed the tabloid said to contain $\frac{1}{40}$th grain with the result that we found exactly the quantity of strychnine sulphate stated. These hypodermic tabloids are certainly valuable and especially in cases of emergency.

"VEDA" BREAD AND BISCUITS.

(Veda Food Co., 8, North Bridge, Edinburgh. Agency: Messrs. Bonthron and Co., 50 and 52, Glasshouse-street, Regent street, London, W.)

An important dietetic feature of Veda bread is that its carbohydrates are largely in a soluble state. According to our analysis a third part of the total solid constituents is soluble in cold water while two-thirds are soluble in hot water; accordingly, the bread readily yields to the converting action of diastase or the pancreatic ferment. The taste is somewhat "treacly" owing to a slight charring of the malt sugar present. Veda bread is much more digestible than ordinary white bread. The mineral matter amounted to 1·19 per cent., the moisture to 36·46 per cent., and the proteid to 12 per cent. Biscuits made with the same meal showed a similar high degree of solubility. The mineral matter in this case, however, amounted to 2·47 per cent., which showed an alkalinity equal to 1·34 per cent. of sodium carbonate

NON-NICOTINIC CIGARS.

(Kissling's Non-nicotinic Cigar Agency, 15, Fore-street, London, E.C.)

We have examined several different specimens of these cigars with regard to the quantity of nicotine. We found that the nicotine varied from 0·15 to 0·18 per cent. The amount of nicotine in tobacco is very variable, but even accepting the lowest quantity ever recorded it is evident that a very considerable reduction in the amount of the poisonous alkaloid has been effected in these cigars. We have not had the opportunity of examining these cigars before they were submitted to the eliminating process, but the amount of nicotine in cigar leaf is generally somewhere between 4 and 1 per cent. In spite of this withdrawal of nicotine the cigars are quite satisfactory from the point of view of the smoker. They give a smoke of pleasing aroma, in which no difference can be detected from the smoke produced from a cigar of good quality which has not been treated in the special way indicated. The best specimens, we think, are those described as "Flor Real."

LEMONA.

(Lemona, Limited, 13, Bartlett's-buildings, Holborn-circus, London, E.C.)

According to our examination this toilet preparation would appear to consist simply of pulped lemon fruit. It is a yellow, creamy substance possessing the agreeable and fragrant odour of the lemon. Our analysis gave the following results: moisture, 87·80 per cent.; citric acid, 5·81 per cent.; and mineral matter, 1·13 per cent. The preparation produces a pleasant cooling effect upon the skin. Lemon juice is reputed to be a useful application to an irritable skin and soothing to the face after it has been exposed to the sun or wind. For this purpose this preparation is well suited, and on the whole lemona is a useful, agreeable, and harmless application for the skin.

OLD BRANDY.

(Thomas Peatling and Sons 8 and 9, Old Market, Wisbech.)

Both taste and the results of analysis are in favour of this spirit being a genuine grape brandy. It has the peculiar merits of matured eau-de-vie of Cognac—soft and mellow to the taste and with pleasing aroma. Analysis gave the following results: extractives, 0·70 per cent.; alcohol, by weight 40·30 per cent., by volume 47·67 per cent., equal to proof spirit 83·54 per cent. The following were the results in regard to secondary products given in grammes per hectolitre of absolute alcohol present: volatile acidity reckoned as acetic acid, 100·80; aldehydes, 12·60; furfural, 1·68; ethers, as ethyl acetate, 138·60; and higher alcohols, 138·60. These results are typical of genuine matured grape spirit.

BADEN-BADEN MINERAL WATER.

(Baden-Baden Mineral Springs Co., Terminus Chambers, 6, Holborn Viaduct, London, E.C.)

The chief constituents of this water according to our analysis are chloride of sodium, carbonate of sodium, and magnesium and calcium salts. We could find no appreciable amount of lithium when operating upon half a litre of the water. The water is pleasantly sparkling and has an agreeably soft though somewhat saline taste. It contains 2·743 grammes of salts in solution per litre as follows: sodium chloride, 2·310; sodium carbonate, 0·159; calcium and magnesium carbonates, with sulphate of the former, 0·274. We cannot indorse its claims in regard to containing any important quantity of lithium salts.

MARKING INK.

(George Vickers, Angel court, 172, Strand, London, W.C.)

According to our examination the vehicle of this ink is amylic alcohol of which it smells strongly. We have given the ink practical trials and find that it answers admirably. The ink is indelible, does not spread on the fabric, and gives a good clear black stroke.

BARCO FOOD.

(Moss Rimmington and Co., Portholme and West Riding Mills, Selby.)

There is nothing strikingly novel about this preparation. According to microscopic examination it is a cereal food modified by dry cooking. The starches are therefore broken up and to some extent altered so that its solubility is higher than that of ordinary wheat flour.

HUNTER BALTIMORE WHISKY.

(W. Lanahan and Son, Baltimore; A. A. Baker and Co., 30, Mincing-lane, London, E.C.)

In The Lancet of Jan. 24th, p. 245, we published an analysis of a sample of Baltimore rye whisky which showed a relatively low alcoholic strength. We understand that this sample was meant for exportation. We have since received samples of the same whisky intended for home trade. Analysis gave the following results: extractives, 0·21 per cent. ; alcohol, by weight 40·80 per cent., by volume 48·21 per cent., equal to proof spirit 84·49 per cent. As will be seen the alcoholic strength of the specimen recently analysed is about that of ordinary malt whisky. The spirit possesses the peculiar flavour and smell of rye spirit. It contains a relatively small amount of secondary products and from this point of view may be regarded as very pure.

MALTICO.

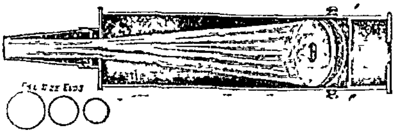
(TAYLOR AND SONS, KINGSTON CROSS, PORTSMOUTH.)

This infants' food is described as being "prepared from the best and purest milk and the extracts of various nutritive malted cereals." According to our analysis it is perfectly free from starch which in the original grain has been converted by the action of diastase chiefly into maltose. Our analysis gave the following results: moisture, 0·90 per cent.; mineral matter, 3·10 per cent. ; milk fat, 8·40 per cent. ; maltose, 67·81 per cent. ; dextrin, 7·79 per cent. ; and proteid, 12 per cent. It will be seen that this food contains all the elements necessary for the infant's dietetic requirements. It would be an advantage, however, if the proportion of fat were increased. Made with milk the preparation gives an excellent infant food rich in all classes of reparative material. No less than 90 per cent. of this food is soluble in water and therefore it is readily digestible.

New Inventions.

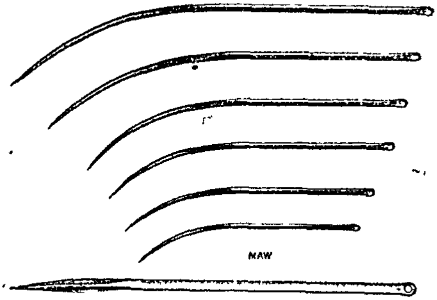
AN IMPROVED OTOSCOPE.

DR. J. B. BALL, physician to the throat and ear department of the West London Hospital, writes: "A magnified image of the drum membrane often reveals changes not otherwise discernible Instruments in which a speculum, a reflector, and a magnifying lens are combined in one piece have long been used for inspection of the ear. Mr. Davidson, of 140, Great Portland-street, has constructed at my suggestion an otoscope of this kind. It is small and very portable. The interior of the otoscope and specula, instead of being bright as in the otoscopes at present most in use, is dead black. This brings out by contrast the image of the parts to be examined with striking clearness. It can be used with good daylight, sunlight, or artificial light It is fitted with three specula of different sizes which can be used separately with the frontal mirror if desired The interior of the specula is first bronzed and then blacked and they may be sterilised by boiling without the blackened surface being affected. The exterior of the instrument is heavily plated so as not to tarnish."



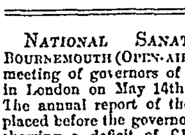
AN IMPROVED SURGICAL NEEDLE.

IN 1900 Messrs Maw and Son of 7, Aldersgate street made to my design a needle specially suited to abdominal surgery. The main features of this needle are three. Firstly, the point, which is triangular or bayonet-shaped, this being, I consider, the best both for penetration and for avoiding the cutting of tissues (and consequent bleeding) which is such a drawback to the Hagedorn point, especially where one is dealing with tissues like the uterine wall Moreover, the point is an easier one to grasp during withdrawal, either with the forceps or with the hand, than that of the latter needle which invariably either turns on edge or cuts the fingers. The second feature is the eye, which is similar to the round Hagedorn eye and like that pattern is threaded easily. The third and last peculiarity is the haft, which is flattened at right angles to the plane of the curve in a manner similar to that which obtains in the so called "reversed" Hagedorn needle. The advantage of this flattened haft is the excellent hold that can be got upon the needle with an ordinary Spencer Wells pressure forceps, thus dispensing with various forms of needle holders, all more or less clumsy and irritating, and simplifying the surgeon's outfit. The needles are made in three different curves and in a number of sizes from very large and strong weapons suitable for the various forms of perineorrhaphy down to the smallest sizes required for intra-peritoneal operations. The results obtained from an extended trial of this type of needle both by myself and others lead me to deem it the most convenient needle for abdominal surgery.



Devonshire street, W. W. F. VICTOR BONNEY, M.D. Lond.

AN OPHTHALMIC DRESSING-TRAY.



THE accompanying illustration represents a tray for use in irrigation of the eye and has been suggested by Nurse Manchester of Guy's Hospital who has previously designed a useful dressing tray for colotomy cases. The present tray is so shaped as to fit against the face and when used with the patient in the recumbent position it rests on the pillow and adapts itself closely to the face. It certainly answers the purpose for which it is intended and in addition will be found useful when syringing the ear. The tray is made by Messrs. Down Bros., Limited, 21, St. Thomas's-street, London, S.E.

NATIONAL SANATORIUM FOR CONSUMPTION, BOURNEMOUTH (OPEN-AIR TREATMENT).—The annual general meeting of governors of this charitable institution was held in London on May 14th at the Westminster Palace Hotel. The annual report of the committee for the year 1902 was placed before the governors, with the statement of accounts showing a deficit of £109, which, added to the existing debt of £431, amounts to a total deficiency of £540. The secretary, however, informed the committee that so far there has been some improvement in the receipts this year. The report stated that a special appeal is being made in order to put the institution in a better financial position, pointing out that the benefits of the National Sanatorium are not limited to the patients who enter it, but extend to the public generally, for every case in which the disease of consumption is arrested removes a source of infection to others. Moreover, every patient is taught the laws of hygiene and the means of preventing the spread of the disease to others and the re-infection of themselves. Upon the national character of its work the committee relies for a generous response to its appeal. The report further states that during the year His Majesty the King was graciously pleased to send a donation of £100.

THE LANCET.

LONDON: SATURDAY, MAY 23, 1903.

The Metropolitan Hospital Sunday Fund.

The meeting of the Council of the Metropolitan Hospital Sunday Fund which was held under the presidency of the Lord Mayor on May 12th, and a report of which will be found in our columns last week, was particularly notable owing to two announcements which were officially made thereat. The one was that the Hospital Sunday Fund collection would be made at St Paul's Cathedral on June 7th, being the date upon which their Majesties the King and Queen would be present to worship and to benefit the London hospitals. The other was that Mr. George Herring repeated his offer of giving £10,000 to the Fund, or one fourth of the whole amount collected, provided that this did not exceed £100,000. The Lord Mayor in his speech pointed out that the whole deficiency of the London hospitals amounted to £250,000 per annum. If, he said, King Edward's Hospital Fund could raise £100,000 per annum, the Metropolitan Hospital Sunday Fund £100,000 per annum, and the Hospital Saturday Fund £50,000 per annum, then no assistance from the rates would be required. He was glad to say that nearly every bank in the City had sent him a donation for the London Hospital and he further adjured the banks and the limited liability companies to contribute to one of the three funds above mentioned. This is a matter upon which not sufficient stress has been laid. When the large businesses were in the hands of personal proprietors contributions were made to charities which are no longer made by the companies which have replaced those proprietors. The boards of directors cannot have personal claims made upon them as the heads of private businesses can, while directors have responsibilities towards shareholders which prevent them from giving way to private feelings of generosity. We hope that directors of limited liability companies in London will recognise the justice of the claim upon the funds which has been urged upon them this year by the Lord Mayor.

Last year the total of the sum received was very nearly £63,000, a larger amount than had ever before been collected. This was a source of credit to everyone concerned, for although there were many circumstances which went to make men and women subscribe—such as its being the year of the coronation of the King and the year in which peace was declared—yet the country had just passed through a costly and lengthy war with the consequence that trade was depressed and taxation was high. This year has seen the lowering of taxation and so we may well hope that the total collected will reach the sum of £100,000, the sum which we have always had before our eyes as the ideal to which the Fund should annually attain. One thing must be remembered, nearly all other charitable collections are unfortunately limited by religious differences. If it be true that

"All equal are within the Church's gate"

still more true is it that sickness and death level all. To the Metropolitan Hospital Sunday Fund all can and do contribute. The Christian, the Jew, and the Mussulman, to say nothing of the members of the many other religions or no religions within our great Empire, all can give of their wealth or of their poverty and like Abou ben Adhem each one desires to be simply written "as one who loves his fellow-men." The influence of a hospital is the true communiser of charity and the surgeon or the physician who on one day gives his skill, under God, to heal a monarch on the next day gives the same skill to heal the poorest in the land. Here are no politics and no bitterness, therefore everyone from the highest to the lowest should contribute. Doubts have been raised as to the wisdom of making the collection upon two different Sundays. We think that on the whole the step is well advised. "Week-ends" are now having a serious effect upon the attendance in our metropolitan churches. The bicycle, the motor-car, the links, and the river draw away hundreds whose excuse is that they are obliged to obtain fresh air and exercise upon their only free day in the week. The collection of Sunday, June 7th, will remind those who do not go to church or chapel that if they do not attend any place of worship on the following Sunday they can and should at least send a subscription to be added to the subscriptions of those who do attend. Let those who are able to seek the country and the free air on a Sunday remember that the hospitals exist for those whose need for health is as great as, or even greater than, their own. Let them remember that if they fall ill they will be tended and possibly restored to health by the skill of one who without a hospital would scarcely have attained that skill. The benefits of the Hospital Sunday Fund are impartially bestowed; a gift from it is a guarantee of sound finance and of good management. Therefore, anyone who gives will feel not only the pleasure of giving but may rest assured that his gift will be laid out in the best possible manner.

In connexion with Mr. George Herring's great and repeated generosity we should like to see urged upon the racing men of the community the claims of the great London hospitals, so that something like a movement might be inaugurated among them to devote a small percentage of their winnings to the succouring of the necessitous poor. The late Baron Hirsch's dedication of a great proportion of his winnings to charity will be remembered, but every devotee of the turf is not a millionaire. Still, every winner can spare something. The idea is not a new one. More than 40 years ago Mr. Joseph Bond, a gentleman well known in connexion with racing, made an offer to the stewards of the Jockey Club which, if it had not been rejected, might have initiated a movement of inestimable value to the London hospitals. Mr. Bond repeated his offer in a letter addressed to the Editor and published in The Lancet of July 5th, 1862, in these words: "My present most earnest appeal (in anticipation of any general measure to be taken by the Jockey Club) is made to the fortunate winners of the Derby and Oaks—viz., that if *they* will kindly consent *this year* to an allocation of 10 per cent. of their winnings" for the benefit of the London hospitals, "I will with pleasure add a contribution of 1000 guineas; but should such percentage be deemed excessive I shall be happy to give an amount equal to *five* per cent. upon their stakes respectively." It will be seen from this that the idea which actuated Mr. BOND was that by getting the owners of two winners of large stakes in a particular year to tax their gains for the benefit of the hospitals he could bring about a general deduction to be made by the assistance of the Jockey Club from all such winnings in the future, and no doubt from all or from a large portion of the stakes of each year. These stakes Mr. BOND put at £200,000 per annum—an amount which, of course, has long ago been largely exceeded. "My constant endeavour," Mr. BOND wrote, "will be to place the turf as an institution in closer affinity with the sick poor of our needy and unendowed London hospitals." In the years that have passed since Mr. BOND wrote these words the hospitals have grown no less needy, no less unendowed: their needs have increased with the population of the metropolis and their endowments have not kept pace with the demands upon their resources. Mr. BOND'S great idea has not borne fruit in any organised taxation of turf profits but a worthy successor to him has arisen in Mr. HERRING, whose princely generosity of last year is to be repeated in 1903. When in 1862 Mr. BOND found that the winning owners to whom he had appealed had not responded to his challenge, he nevertheless carried out his part of the undertaking, and his gift of £1000 was divided, the greater part being given, largely through the medium of THE LANCET, to seven London hospitals and the remainder devoted to the provision of a drinking fountain in the parish of St. Clement's Danes. Mr. BOND also presented to the hospitals some valuable works of art which were placed either in the convalescent wards or board-rooms, where they will be found at the present time—fitting memorials of his generosity and of his well-intentioned efforts. From the hundreds of thousands of pounds which change hands every year upon the turf we would claim a percentage for the suffering poor in the London hospitals and would welcome an attempt at an organised movement on these lines this year.

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Personal Performance of Duties by the Workhouse Medical Officer.

A MEDICAL man commencing practice may be inclined to avail himself of an opportunity of becoming medical officer at the union workhouse. He sees in the appointment the source of a small addition to his income—an addition somewhat attractive, not by the pleasantness of the work to be performed for it, but by reason of the certainty and punctuality in the payment. Probably it will occur to him that if he himself should fail to step into the vacant post some other person will inevitably be installed and that the other person in consequence of the help afforded by the appointment may become a permanent competitor with him for the practice of a district too small to supply the needs of more than one practitioner. Rarely until he has entered upon his duties does the newly elected workhouse medical officer realise the exacting nature of the conditions which will affect him during his tenure of the position. Nor will the contract which he is required to sign make clear to him all the irksome limitations and responsibilities to which he is expected to submit. A search through the General Consolidated Order of 1847 and the notes upon it will, however, reveal the terms of his engagement and enable him briefly to set forth some of the more important of those terms in the form of the paragraphs given below:—

(*a*) Every officer of the union shall perform his duties in person and shall not intrust the same to a deputy except with the special permission of the Commissioners (now the Local Government Board) on the application of the guardians.

(*b*) The medical officer shall be bound to visit and attend personally, as far as may be practicable, the poor persons intrusted to his care and shall be responsible for the attendance upon them.

(*c*) The medical officer cannot expressly delegate to his assistant in his general practice the duties of his office, however well qualified, legally or otherwise, such assistant may be.

(*d*) Though an assistant may visit a patient or aid his principal in the performance of his duties no diminution or subdivision of the duty of personal attendance and personal responsibility on the part of the medical officer will be recognised on that account.

(*e*) The medical officer must immediately after his appointment name to the guardians some legally qualified medical practitioner to whom application for attendance may be made in the case of his absence and the medical officer will be responsible for the skill and diligence of the person named by him. The name and address of every practitioner so named must be forwarded by the clerk to the guardians to each relieving officer and to the overseer of every parish in the district of such medical officer. The guardians have the power to object to the appointment of the practitioner so named if they should not approve of him.

(*f*) The visit or attendance made or given to any pauper by any person employed by the medical officer must be shown in the book prescribed under the General Consolidated Order of 1847. Medical men not being medical officers of the union are not entitled to any fees under the same order for operations performed upon paupers or services rendered except by the will of the guardians.

(*g*) The medical officer must not only attend at the workhouse at the periods fixed by the guardians but also whenever he is sent for by either the master or the matron. He must record every attendance in a book provided and give a return to the guardians at each meeting of the particulars of the attendance. It is the duty of the master to cause every pauper upon admission to be examined by the medical officer; to send for the medical officer when any pauper is taken ill; and to take care that all sick paupers are duly visited by the medical officer.

It may be gathered from the above statements that the task of the workhouse medical officer is no light one; that the mere labour of going to and from the workhouse, apart from the work there to be performed, may be a matter of great moment; that the medical officer's comfort depends to a large extent upon the temperament of the workhouse master who may see serious symptoms in every simple ache of an inmate; and that the rigid requirements of the Local Government Board as to personal attendance are particularly burdensome to a medical man who has a private practice of even moderate size. The question has been put to us—Are these rigid rules for personal service absolutely necessary? The answer must be—They were necessary at the period of their institution but they are so no longer; neither is it possible for them now to be observed in the large workhouses. At the date of the issue of the General Consolidated Order a vast amount of medical work in the practices of the country was performed by unqualified assistants and by pupils or apprentices. It was fitting, therefore, that the Poor-law Commissioners should impose conditions upon all holders of parish medical appointments and they did so effectually. Their object was to prevent the sick and infirm inmates of the workhouses being left to the care of persons only partially educated in their professional duties. The result was good, but times have changed and there is now justification for a reconsideration of the circumstances. The pupils and the unqualified assistants have had their day. Few of them can at this period be found. The assistants of medical practitioners are not only legally qualified to practise their profession but their training at the hospitals has been, both in duration and in the number of subjects taught, far beyond that given to the principals of 1847. We therefore arrive at the conclusion that there is no longer any necessity for the workhouse medical officer to be debarred from using his duly qualified assistant as a substitute, within certain limits; always providing that the qualified assistant has been named to the guardians and approved by them.

There is, however, another aspect. Workhouses have grown immensely in size since the regulations for their administration were constructed. Many can now be found each containing over 1000 inmates and many have in their sick wards more than 500 patients. One that is well known to us is not by any means the largest but it has over 1700 beds without the infirmary, which contains nearly 300 more. For this vast population there is but one recognised medical officer. Obviously it is impossible that he can give personal service in every case of sickness. One minute a day for each of 600 patients would mean ten hours' work. The difficulty is met by the appointment of several assistants and by the division of the medical duties. In another workhouse infirmary there are two non-resident medical officers and two resident assistants, but which is the responsible official it is beyond our power to decide. We mention these facts in order to show that the regulations of the General Consolidated Order of 1847 are not observed in all Poor-law institutions, that owing to the numbers of the patients to be attended they cannot possibly be observed in every workhouse by one medical officer, and that a revision of the regulations and an adaptation of them to modern conditions are much to be desired.

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The University of London and Dental Surgery.

As the Faculty of Medicine of the University of London has under consideration the institution of degrees in dental surgery, it may be opportune to consider briefly the various phases of this important question, and the more so as there is a marked divergence of opinion among those who have considered this matter in its bearings upon dental education. There is a section which considers that the right course to pursue for the advancement of dental surgery is to raise the standard of the training all round, in fact, to bring the general curriculum up to the standard required of students of medicine as a whole. On the other hand, a considerable, if not so numerous, body of persons, having a good right to form an opinion, hold that the advance should be made by the institution of higher dental degrees, the curriculum being rendered more stringent mainly by requiring from the student a wider and deeper knowledge of the special subjects of dental surgery. These two parties are both represented on the board of studies of dental surgery of the University of London and they have embodied their views in two reports which are now under the consideration of the Faculty of Medicine. The majority report, we believe, considers that if the University deems it advisable to institute a degree in dental surgery then it should only be granted supplemental to a medical degree. The minority report advises the institution of a separate degree in dental surgery, the requirements in general subjects being in advance of those at present demanded by the different licensing bodies.

Under the Dentists Act the only registrable diploma in the United Kingdom is a licence in dental surgery and this is at present granted by the Royal Colleges of Surgeons of England, of Edinburgh, and in Ireland, and the Faculty of Physicians and Surgeons of Glasgow. The framers of the Dentists Act were strongly of opinion that only one diploma should be instituted for practitioners in dentistry so that the multiplicity of qualifications, which has imported many difficulties into the practice of medicine in this country, should be avoided. Their action was sound and all educational bodies should agree with it and should keep clearly in view that the object of degrees and diplomas is mainly to guide the public so that the public may know when it is dealing with a qualified man. The multiplicity of qualifications is bewildering to the public and serves no good purpose It leads it to attempt to discriminate between one qualified man and another qualified man, while protection is really needed against the charlatan and quack who frequently place after their names meaningless letters simulating regular qualifications. The University of London in establishing examinations in dental surgery will either grant a licence similar to that of the various colleges or it will establish a degree which can be registered as additional to the licence in dental surgery obtained through one of the medical corporations. If the desire of those urging upon the University the establishment of a dental degree is that the examination should be considered a qualifying one in dental surgery similar to that of other colleges, then there is no reason why the University should not grant a licence in dental surgery; but if the desire is that the degree should be regarded as a higher qualification than the licence in dental surgery then we are strongly of opinion that it should only be conferred as supplemental to a medical degree. Dentistry is to be regarded as an integral part of medicine, a view held, we suppose, by the advocates of higher dental diplomas; and dentistry can only obtain and retain that position by examining its students in a similar way to that in which other members of the medical profession are examined.

The weakness of the present qualifying examinations in dentistry lies in the low standard of knowledge required on general subjects and any step towards higher qualification can only rationally be made by requiring a better foundation of knowledge. The scheme suggested by the majority of the board of studies is that a degree in dental surgery (even if it is advisable to establish one) should be granted only to those possessing the M.B. and B.S. degrees of the University. The minority suggests that the student for the degree should pass the first examination for the degree of M.B. and that the examination in surgery and pathology should be similar to that for the degree of B S. Medicine and therapeutics are, it will be seen, to be ignored not only in the curriculum required but also in the examination. The latter scheme seems to us to be retrograde, for day by day it becomes clearer that a thorough knowledge of the surgical branch cannot be acquired without a comprehension of the principles and practice of medicine as a whole. If the practice of surgery were confined to operations then perhaps the position assumed by the constructors of the minority scheme for the granting of dental degrees in the University of London might be intelligible, but surgery is not a higher grade of cabinet-making. Surgery entails for its scientific practice a thorough knowledge of the principles underlying medicine as a whole. Dental surgery may be regarded from exactly the same standpoint. In some quarters it has been, and still is, the tendency to estimate the practice of dentistry as something requiring simply manipulative dexterity, but this view has arisen partly from a want of knowledge of the processes underlying dental disease and not a little from that narrowed vision which the training of the dental surgeon produces and which can only be made broader by raising the standard of general and scientific education. With the increased number of medical men specially qualified as dental surgeons a marked advance in dental pathology has taken place and the inter-dependence of dental lesions, more especially of the gums and periodontal membrane, and general systemic conditions has been shown. The dental surgeon in his practice is constantly dealing with cases which require for their rational treatment a knowledge of medicine, a fact which the authors of the minority report do not appreciate, in our opinion, in its right significance. They would not, we are sure, consider that such well-defined branches of medical practice as, say, ophthalmic surgery or gynæcology, should be practised by men with only a scant knowledge of general medicine and surgery. To our thinking, dental surgery should rank with the other special branches; at any rate, all who practise dental surgery should be found wishing this, for only in this way can the scientific status of dentistry be maintained.

Annotations.

"Ne quid nimis."

THE ROYAL MILITARY TOURNAMENT.

FROM a practical point of view one of the most interesting items in the programme of the Royal Military Tournament now being held at the Agricultural Hall, Islington, is the display by the recruits from the Marine depôt at Deal who have been in the service for six months only and whose average age is 18 years. These lads have had but 45 days' gymnastic training, yet their muscular development, agility, and smartness in response to the word of command are wonderful considering the brief period of instruction. The exercises which they go through bring into play all the important muscles of the body and educate at the same time the intellectual faculties. In previous years at the Tournament similar exercises have been practised by non-commissioned officers under training at the headquarters gymnasium, Aldershot, who if we mistake not underwent a six months' course and not a 45 days' course. Undoubtedly the non-commissioned officers from Aldershot showed remarkable muscular power combined with intellectual activity both while acting individually and collectively. So do the Marine recruits, but it is distinctly noticeable that some of them are working at the highest possible strain. It speaks well both for officers and for men that such remarkable results should have been accomplished in so short a period as 45 days, but there must be always some risk in a too strenuous and hasty endeavour to build up muscle. It remains to be seen what the effect will be when, after completing their course, the men relax their training, for it must be remembered that over-taxation of the vascular system may produce untoward results at a subsequent time. A curtailment of the period of training may, therefore, in the end be a means of loss instead of gain to the service. Another noteworthy example of strength and ability is the display by the Royal Marine Artillery. The general idea of this display is to show how a gun with its mountings landed from a man-of-war can be transported and mounted in an extemporised manner on shore. The gun, mounting, and stores, together with the wagon on which they are placed, weigh six tons and are drawn into the arena by 38 men. The slinging and unslinging of the gun on the extemporised gin require some skill and precision in placing the gun centrally. When the men begin this kind of training the weights with which they have to deal tax their strength to the utmost. At the Tournament, however, the gun is manipulated with as much ease as if it were a toy. Altogether this is a truly remarkable performance. In this connexion it would not be fair to leave unnoticed the display by seamen of His Majesty's ship *Excellent* with 12-pounder guns. The way in which these guns are manœuvred, mounted and dismounted, and lifted with ease over an obstacle representing a wall must be seen to be appreciated. These three items in the programme alone form an object-lesson which it would be well for everyone to see.

INSURANCE AGAINST APPENDICITIS.

THE sudden increase in the popular knowledge of appendicitis has given rise to the idea that the malady occurs more frequently than is really the case, with the result that it is dreaded more than it need be. So it has even happened that it has been thought advisable to insure against the loss of time and of money entailed by an attack. The Royal Exchange Assurance Company is willing to issue policies of insurance at the rate of 5*s*. per annum for every £100 and a policy may be effected up to £500. By such a policy the holder is guaranteed all the medical, surgical, and nursing expenses, up to the amount insured, incurred by an attack of appendicitis. The company points out that this premium may be largely increased in the near future, for it is obvious that at present the "risk" of such a policy can be only very indefinitely estimated. The only data supplied by the leaflet which we have seen are that during 1900 15,000 operations for appendicitis were performed in the United Kingdom and that the mortality of these operations was 10 per cent. We are not aware whence these statistics have been obtained and, in fact, we cannot see how it is possible to discover the number of operations because the vast majority are never recorded. Be this, however, as it may, it must be borne in mind that many cases diagnosed as appendicitis recover without operation and therefore the total number of cases should be much greater. In the proposal for insurance there is one important question to be answered. It is this: Have you or has any member of your family ever suffered from appendicitis or from any of the symptoms pertaining to it? This is a very wide question, for apparently a negative answer would mean that neither the would-be insurer nor any member of his family had ever had a pain in the right iliac fossa. Another difficulty is that it is not clear what the word "family" includes. It is possible that this question in-

inscribed only to obtain statistical information as to the family liability to appendicitis, for at present it cannot be laid down that the disease is specially prone to attack certain families. In the "declaration" also the insurer has to state that he has no reason to believe that he is specially liable to the disease. There is one important condition attached to these policies: the liability of the company does not commence until one month after the proposal has been accepted and the premium has been paid, so that it will not be possible for anyone who experiences symptoms which he thinks may be due to appendicitis to rush off and to insure. The utility of the scheme depends entirely on the liability there is to an attack of appendicitis. Should the disease arise the loss of money incurred by medical, surgical, and nursing expenses would certainly be very troublesome to many and anyone attacked would be very glad to have insured against this sudden expense by the payment of such a small premium and if anyone feels inclined to insure there cannot be any harm in doing so. From the amount of the premium we see that the company estimates the probability that any individual will be attacked by appendicitis in any one year as at most less than 1 in 400 and we should feel inclined to think that the risk is very much less than this, but no statistics exist to show the percentage of attacks in the general population though they may be obtainable for such bodies of men as the army and the navy. As many cases, in this country at least, are not submitted to operation disputes might easily arise as to the accuracy of the diagnosis. Moreover, it has not rarely happened that appendicitis has been diagnosed, the abdomen has been opened, and some other lesion has been found. If the patient had been insured we can imagine his disappointment when he found that the fees and other expenses were payable out of his own pocket. We would not in the least dissuade anyone against insuring, but we must confess that in our opinion a wider policy to include any similar severe illness would prove much more useful in practice. At present it is possible to insure against sickness and accident, but the sum paid is so much per week and does not necessarily cover the expenses incurred.

NOTIFICATION FEES.

NOTWITHSTANDING the fact that the Notification Act has now been in operation for many years the subject of the fees payable under its provisions seems to be a never-ceasing topic for discussion and dispute. This is, we expect, partly due to the fact that a copy of the Act itself is possessed by few medical men and partly to the absurd fee of 1*s*. which is paid to those who notify cases of notifiable diseases in their capacity as officers of public institutions or bodies. We can quite understand that district medical officers under the Poor-law and others who are not quite familiar with the statutes are unwilling to believe that the legislature has provided no further fee than 1*s*. for the trouble of notifying the cases of infectious disease with which such officers are brought into contact during the performance of their official duties. We have recently had a case brought to our notice of a district medical officer who is content with the customary 1*s*. for cases concerning which he has received a relieving officer's order but who claims 2*s*. 6*d*. in respect of subsequent cases occurring in the same house but as to which no order has been given. We are afraid, however, that, assuming that the cases were treated by the district medical officer in his official capacity, the smaller fee is the only one that can be legally paid. The words of the Infectious Disease (Notification) Act, 1889, which govern the situation, are: "and of one shilling if the case occurs in his practice as medical officer of any public body or institution." Unless, therefore, the cases to which reference has been made were attended by the district medical officer in his capacity of a private practitioner he is not entitled to the larger fee of 2*s*. 6*d*. It would seem improbable, seeing that an order had been procured for one member of the family, that any other member thereof could be regarded as employing a medical man as a private practitioner, and it would seem more probable that there has been some omission on the part of the relieving officer or the district medical officer, in the one case in supplying an order or in the other of notifying the fact of attendance without an order. So far as we are in possession of the facts we do not think that the case to which we refer is one in which a fee of 2*s*. 6*d*. could be reasonably claimed.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THE Council opened its summer session on Thursday, May 21st, at 2 P.M., Sir William Turner, K.C.B., the President, being in the chair. The session this year is being held somewhat earlier than usual in order that Whitsun-week may be avoided. After hearing the President's address the Council proceeded to the consideration of various matters of medical education. Our usual report of the proceedings will be commenced in our next issue.

THE PHARMACEUTICAL SOCIETY.

THE annual dinner of the members of the Pharmaceutical Society of Great Britain and their friends was held under the chairmanship of the President, Mr. G. T. W. Newsholme, in the Whitehall Rooms of the Hôtel Métropole, London, on May 19th. After the usual loyal toasts had been duly honoured Mr. Newsholme from the chair proposed the toast of "The Houses of Parliament," which was replied to by Mr. J. F. Remnant, M P., who, referring to the new Pharmacy Bill, said that he had heard some criticism in the House in regard to that clause which says that a director of a company must be a qualified druggist before he can deal with the ordinary business of a druggist. Concerning that matter there was an opinion given in the House of Lords that the Act could not apply to directors of limited liability companies. This toast was also acknowledged by Mr. E. Marshall Hall, M.P., who declared that the new Pharmacy Bill could not pass into law in anything like its present form and he advised the society to accept half a loaf as better than nothing at all. He suggested that the Pharmaceutical Society should obtain powers over its members in the same manner as the General Medical Council has over medical men. If it could bring the power, influence, and prestige of the society thus to bear on its members then it would have a remedy against the evils which it was anxious to eradicate. Mr. Marshall Hall bluntly told his audience that a large portion of the business of a druggist as now carried on could be intrusted to unqualified assistants and even to shop lads. So long as the public made no discrimination between a qualified druggist and a salesman of sundries so long would it be difficult for Parliament to deal with the evil. But the Pharmaceutical Society armed with the powers which he had suggested could undertake the matter. In regard to the companies trading as druggists the department particularly concerned with the business of the druggist should be managed by a properly qualified druggist. The toast of "The Medical Profession" was proposed by the chairman and responded to by Sir William S. Church who drew attention to the embarrassing multiplicity of the compounds turned out for the use of medical men by the synthetical chemist. If physicians needed to be careful in the use of drugs the public ought to be careful in the use of the so-called chemical foods, though if one half of the advertisements about these foods could be believed not only would they ward off disease but they would even overcome death itself. The chairman then proposed "The Pharmaceutical Society of Ireland" which was acknowledged by Mr. G. D. Beggs. He was followed by Sir A. W. Rücker, principal of the University of London who, in proposing "The Pharmaceutical Society," gave in detail the reasons for hoping to effect some connexion between the new University of London and the society. The chairman suitably acknowledged the toast and then proposed "Local Pharmaceutical Associations" which was acknowledged by Mr. W. Giles of the Aberdeen Pharmaceutical Association. M. E. Léger of the Pharmaceutical Society of Paris responded to the toast of "Our Guests," which was proposed by the chairman, after which the proceedings terminated.

THE PATHOLOGY OF DWARFISM.

THE pathology of dwarfism like that of gigantism has for long remained an obscure matter and it is only recently that light has been thrown upon the morbid processes underlying both these conditions of abnormal bodily development. In THE LANCET of March 14th, p. 747, an account was given of the pathology of gigantism and it was shown that certain cases of extraordinary growth in length of the bones and limbs were due to a morbid process allied to the condition known as acromegaly. In the *American Journal of the Medical Sciences* for May Dr. Ludwig Hektoen of Chicago contributes an interesting post-mortem study of a dwarf, which is placed on record as affording further insight into the nature of the pathology of certain obscure anomalies of osseous development allied to cretinism and rickets which result in stunted or dwarfish development. In this case, as in cases of gigantism studied post mortem, certain changes were found in the thyroid and pituitary bodies the significance of which will be alluded to below. The patient was a man, aged 45 years, a short-limbed dwarf, of fair average intelligence. He could not walk very well and earned a living by selling lead-pencils and chewing-gum. He generally used a roller-chair for locomotion. He was given to alcoholic excess and died from a ruptured gall-bladder. The post-mortem examination revealed the following interesting conditions. The long bones of the upper and lower limbs were excessively curved and marked by nodular enlargements, especially at the articular ends. The legs were notably short, the patient being an example of a micromelic or short-limbed dwarf. The spinal column was of average length but there was a marked degree of kyphosis, the whole dorso-lumbar and lumbo-sacral region being strongly curved with the concavity forwards. The viscera did not show signs of organic disease with the exception of the thyroid body which was atrophied, fibroid, and weighed only nine grammes. The aorta was small and measured nine millimetres in diameter. The bones were the chief objects of interest. Sections of the various long bones showed an exceedingly spongy structure (osteoporosis). The spine and pelvis as well as the limbs were unusually bent or misshapen. The cranial vault was relatively large but its structure was most anomalous as it consisted of 172 Wormian bones. The base of the skull showed no evidence of premature synostoses of the sutures. The pituitary body and the sella turcica were much enlarged. In discussing the nature of the morbid process which led to this remarkable hypoplasia and defective development of the skeleton Dr. Hektoen passes in review the four possible etiological factors—rickets, cretinism, osteogenesis imperfecta, and chondrodystrophia fœtalis. The condition of the cranium both as regards its vault and base suggests strongly the presence of osteogenesis imperfecta as described and illustrated in the memoirs of Stilling[1] and Harbitz.[2] Most cases of osteogenesis imperfecta hitherto recorded have, however, terminated fatally in infancy, the present case being a rare instance of a person afflicted with this disease surviving to adult life. The patient was not a cretin, adds Dr. Hektoen, for he had not the physiognomy or the bodily development of a cretin, while his intelligence was of the average grade and he was free from signs of myxœdema. The evil effects of fibroid atrophy of the thyroid gland—a process which ordinarily would give rise to myxœdema or which, if it occurred early, would produce cretinism—were in this case compensated or wholly alleviated by a hypertrophy of the pituitary body the weight of which was found to be considerably above the normal. The histological structure of the pituitary body was, moreover, normal in this case. The patient's ribs were beaded and excessively curved, but, says Dr. Hektoen, ordinary rickets could be excluded in the present case owing to the porosity of the bones, whereas in rickets an increased density of the bones is met with. The lesion was more probably of the nature of so-called "fœtal rickets" or chondrodystrophia fœtalis—"a disease known to have existed even in ancient times, since statues of the Egyptian god Phtah and other deities are good representations of the external appearances produced by this disease," as has been shown by Harbitz (in his memoir referred to above) and by Charcot and Richer in their classical work, "Des Difformes et les Maladies dans l'Art," Paris, 1889. The lesions of the thyroid body and the compensatory hypertrophy of the pituitary body in the present case are apparently conditions giving rise to disturbances in the development of the osseous system—disturbances common alike to gigantism, acromegaly, and dwarfism. The proximate cause of the pathology of dwarfism is thus brought into light and shown to be a nutritive disturbance associated with changes in the thyroid and pituitary bodies, but the ultimate cause of the osteogenesis imperfecta still remains, concludes Dr. Hektoen, a problem for future solution.

TENT LIFE FOR THE DEMENTED AND UNCLEANLY.

THE experiment of treating the tuberculous insane in tents, concerning which subject a leading article was published in THE LANCET of May 2nd, p. 1249, was initiated two and a half years ago by Dr. A. E. Macdonald, medical superintendent of the Manhattan State Hospital East, New York. The scheme proved such a success that it was decided to open another camp for filthy and demented patients. Accordingly in July, 1901, 20 patients of that class were selected for undergoing the system of tent life. At the last annual meeting of the American Medico-Psychological Association held at Quebec last year, a reprint of the proceedings of which now lies before us, Dr. Arthur B. Wright of the Manhattan State Hospital for the Insane gave an account of the working of this scheme. Most of the patients were very stupid and demented, taking little or no interest in their surroundings or in their own welfare. Of the 20 patients it was noticed that 19 showed physical improvement and increase of body-weight after three weeks of residence in the tents. The remaining patient continued unchanged a little longer, but after six weeks he began to manifest decided improvement. All the patients improved both physically and mentally and several of them whose habits had been previously wet and dirty began to attend regularly to the calls of nature and to develop more cleanly habits. Two general paralytics exhibited marked improvement. Both at first were practically bedridden but at the end of three months were among the most active. The situation of the camp being in a most pleasant spot on the east bank of the island the steamers and excursion boats which were continually passing were watched by the patients, while the music on board the vessels was listened to with interest. All the patients showed increased appetite, greater interest was shown in papers, magazines, and games, while more cheerfulness and mental brightness seemed to prevail. During warm and pleasant weather the flaps of the tents were rolled up so that a free circulation of air was established, and the few patients who remained in bed were practically out-of-doors. The experiment of tent life for this class of the insane was, adds Dr. Wright, an entire success. Several of the patients have been closely observed since the breaking up of the camp, and it was noted that some of them tended to relapse into their former habits. It is intended, says Dr. Wright, to open another camp during the summer of 1903, for the same class of patients as well as a camp for convalescent patients.

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[1] Virchow's Archives, 1889.

[2] Ziegler's Beiträge, 1901.

CYCLING AND MOTOR-CARS.

ALTHOUGH cycling is still a popular pastime, yet there is distinct evidence, we think, that it is not so universally or so vigorously pursued as it used to be a year or so ago. Possibly this is due to the counter attractions of golf and motor riding. We rather incline to the view that the cyclist is being gradually driven from the road by the motor-car which all must agree has not made the road a pleasanter highway. It is a common remark that cyclists take more frequently to the by-roads than formerly because the high-roads have been almost monopolised by the motor-car. The noise and dust and pace of the motor-car have taken the poetry completely out of a ride on the high-road. The risks of cycling have been enormously increased and already a crop of accidents to cyclists has been reported having their orgin in fast-driven motor cars. The dust created is not only most unpleasant but also very unhealthy for on any favourite high-road out of London the condition created by the motor-cars is one of chronic dust like a fog. All this doubtless the cyclist can avoid by taking to the by-roads, but when on a tour these roads are often not direct, while their surfaces may not be good and there are no sign-posts or caution boards by the wayside to guide him. At night time the danger to the cyclist from motor-cars is considerably increased. Indeed, to many cyclists the motor car is a source of terror on the road, the timid dismount as soon as they hear its rattle behind them and others, realising what awkward consequences might ensue from a false turn of the steering gear, give the motor-car the widest berth possible. Again, it is to be feared that some few motor drivers, knowing the terror which they inspire and that they are masters of the situation, are deliberately discourteous and allow the smallest margin possible for a cyclist to pass. Is it then a matter for wonder that the healthy and enjoyable pursuit of cycling should be somewhat on the decline? But it is a pity that it is so and we can only hope that impending legislation with regard to the regulation of motor-cars may not ignore the claims of the cyclists to consideration.

THE LYMPHATICS OF THE URETERS.

DIFFERENCES of opinion exist in regard to the distribution of the lymphatics in the walls of the ureters, Krause, for example, stating that the lymphatics form a superficial wide-meshed plexus of vessels in the mucous membrane and a well-developed plexus in the submucosa. The vasa efferentia or larger abducent ducts are situated in the tunica adventitia. Sappey, on the other hand, remarks that in the horse the lymphatics of the ureters arise exclusively in the muscular tunic. If the internal or mucous surface be pricked no vessels appear, but as soon as the point of a syringe charged with mercury penetrates the superficial layer the mercury enters a system of capillaries which forms a very distinct network extending with irregular meshes throughout the whole length of the duct. The subject has again been studied by Dr. K. Sakata, in the Anatomical Institute of Breslau, and his conclusions are that no plexus of lymphatic vessels can be demonstrated by Gerola's method of injection in the mucous membrane or in the submucous tissue of the ureter. Such a plexus is, however, to be found in the muscular tunic and in the adventitia, where the vessels are larger and run parallel to the blood-vessels. The vasa efferentia are most conspicuous in the middle portion of the ureter and pass to the lumbar glands which lie close to the aorta and vena cava inferior and to the mesial side of the common iliac artery. The lymphatics of the lower segment of the ureter terminate either in the hypogastric glands or anastomose with the lymphatics of the bladder. The lymphatics of the upper segment only occasionally end in the glands that lie at some distance at the side of the aorta; in other instances they join the lymphatics of the kidney. The lymphatic vessels which establish a connexion between those of the bladder and those of the kidney do not take a direct course between these organs but either form afferent vessels running to glands or join the lymphatics of the ureter. Coloured drawings illustrating the above statements accompany the text which is to be found in the number of the *Archiv für Anatomie und Physiologie* of Professors His and Engelmann for March, 1903.

CAMBRIDGE SCIENCE SCHOOLS.

THE large lecture room of the engineering laboratories' new wing at Cambridge was the scene of an interesting ceremony on May 11th when a bust of the late Dr. John Hopkinson was unveiled. What Sir George Humphry and Sir George Paget were to Cambridge in the matter of a medical school that was Dr. John Hopkinson with regard to the engineering school of the University. In other words, it is hardly too much to say that he was the founder of the engineering school which is now flourishing at Cambridge. To have achieved a result such as this is, as Lord Kelvin observed in his remarks at the ceremony on May 11th, to have benefited, not only Cambridge University, but the world at large. The practical benefits which are spread through scientific training at a university are well recognised by men of business and it is an appropriate evidence of such recognition that the chairman of the Linotype Company, Sir Joseph Lawrence, should have presided at the unveiling of Dr. Hopkinson's bust, the bust itself being the gift of the company to the University of Cambridge. One thing that is often not recognised by business men is the pecuniary difficulty which the ancient universities find in providing for the necessary advances in scientific teaching. Professor Ewing told a very *àpropos* story on this point at the gathering on May 11th and we hope that his words may lead to an increase in the coffers of the science schools of the University of Cambridge, where the medical faculty does such good work and is so much in need of financial help.

RICHTER'S HERNIA.

"RICHTER'S hernia" or "partial enterocele" is the name applied to the condition when only a portion of the circumference of the bowel is included within the hernial sac. It was formerly confused with Littré's hernia—that is, a hernia of Meckel's diverticulum—but Sir Frederick Treves suggested the suitability of the application of the name of Richter to the partial enterocele, as it appears to have been clearly described by him in 1779. Mr. McAdam Eccles has pointed out, however, that Lavater wrote an account of this variety of enterocele in 1672, though his description was not published until 1755, and that therefore Lavater's name might reasonably be associated with this condition. The late Mr. J. W. Hulke made it clear that Littré described not only the hernia of Meckel's diverticulum, now called a "Littré's hernia," but also in 1714 a true partial enterocele, for he distinctly refers to the fact that the whole circumference of the bowel was not included. Thus it is clear that the honour of first recognising the condition must be shared, but as Littré's name is now applied to another variety of hernia and as Richter's name is usually given to partial enterocele it would probably be well to retain the present designation. The condition is not a mere pathological curiosity. So long as no strangulation occurs a partial enterocele is not to be distinguished from an ordinary enterocele, but it is when this variety is strangulated that the peculiar importance of the condition is seen, for in about two-thirds of the cases the signs and symptoms of strangulation are obscure or incomplete. The bowels may continue to act during the whole progress of the strangulation or they may be opened by aperients. Even persistent diarrhœa may occur. Inasmuch as frequently there is no blocking of the lumen of the bowel, tympanitic distension of the abdomen is rare; and even when the site of the hernia is examined it may be difficult to detect it, for often it forms a very small swelling. Some degree of vomiting is frequently present but it is usually not severe and is rarely feculent. In spite, however, of the mildness of the symptoms the mortality is very heavy, amounting in the 53 cases collected by Sir Frederick Treves to over 62 per cent. This heavy death-rate is in part to be accounted for by the obscurity of the symptoms, with consequent delay in operation, and partly to the tightness of the constriction. The hernia is usually of the femoral variety, for at the crural ring there especially exist the conditions required for the nipping of a part of the circumference of the gut. It is of interest to note that a large proportion of obturator hernias are partial enteroceles and this may help to account for the obscurity of the symptoms in that form of hernia. Richter's hernia is probably less rare than might be imagined from the number of recorded cases, but it is probably often unrecognised. In the present issue of THE LANCET (p. 1444) are the notes of two instances of this interesting lesion which were under the care of Sir William J Collins.

ANNUAL DINNER OF THE SANITARY INSTITUTE.

THE members and friends of the Sanitary Institute dined together on May 15th at the Hotel Cecil, London, the Duke of Cambridge, the President of the institute, being in the chair. In replying to the toast of the "Queen and Royal Family," proposed by the Duke of Northumberland, the Duke of Cambridge said that the work and welfare of the Sanitary Institute had always interested him and as long as he was granted health and strength he would be willing to promote its prosperity. "The Navy, Army, and Auxiliary Forces" was given by Sir Francis S Powell and was replied to by Sir Henry F. Norbury (Director-General of the Royal Navy Medical Department) who gave some interesting details concerning the increase in the navy. This toast was also acknowledged by Lieutenant-Colonel A. S Jones, V.C Sir Henry G. Howse, President of the Royal College of Surgeons of England, proposed the toast of "The Houses of Parliament" and pointed out that the members of the Sanitary Institute included eminent engineers, members of the House of Lords and members of the House of Commons, scientific men, and representatives of municipal authorities and of the medical profession The meeting together of these members of the Sanitary Institute must be useful in crystallising their views in regard to sanitary legislation. Lord Monkswell and Mr. Talbot, M.P., acknowledged the toast. In proposing the toast of "The Sanitary Institute" Sir William S. Church, President of the Royal College of Physicians of London, congratulated the institute on its flourishing condition. In the course of some interesting remarks on the history of sanitary legislation Sir William Church described how in the archives of the City of London there were some instructive accounts of the measures taken to benefit the health of the people. The beadles of the City were enjoined to perambulate the streets and to prevent swine straying, and further they were ordered to arrest all vagrant men because, as the directions went on to explain, these men might be the cause of spreading disease. He urged the Sanitary Institute to spread the knowledge of sanitary matters among the people and to continue holding congresses in provincial cities, thereby attracting general attention to the subject of hygiene. The institute had done good work in giving 470 lectures which were attended by upwards of 22,000 people. After Mr. W. Whitaker had briefly acknowledged the toast the company separated. Amongst those present besides the speakers were Sir H. Crawford, Sir S. Black, Sir A. Binnie, Major R. Ross, Dr. L. C. Parkes, and Dr. W. Collingridge.

POST-GRADUATE STUDY IN LONDON.

IT is satisfactory to hear that the Association of London Hospitals and Medical Schools, which offers such exceptional advantages for clinical study to qualified medical men, is still steadily increasing its scope. We are authorised to state that the London Hospital has now joined the scheme which is therefore complete so far as it embraces all the institutions recognised by the University of London for medical education—viz.:—*General hospitals:* Charing Cross, Guy's, King's College, London, Middlesex, St. Bartholomew's, St. George's, St. Mary's, St. Thomas's, University College, and Westminster. *Special hospitals:* The Brompton Hospital for Diseases of the Chest, the Hospital for Sick Children, Great Ormond-street, the London School of Tropical Medicine, the National Hospital for the Paralysed and Epileptic, and the Royal London Ophthalmic Hospital. The wealth of clinical material in London is almost incalculable but unfortunately its value for post-graduate instruction is materially diminished, partly by the extent of the area over which it is spread and partly by the lack of connexion between the various hospitals in which it is contained. The one difficulty, that of distance, is of course irremediable; the other, that of lack of coördination, is to a large extent met by the present scheme, and for that reason we wish it continued success. The fee is moderate (seven guineas for a three months' course and ten guineas for six months) and should offer no obstacle to those who wish to devote some time to clinical study in medicine, surgery, or any of the special departments Particulars may be obtained on application to the Secretary, the Associated Schools of Medicine in London for Post-Graduate Teaching, Examination Hall, Victoria Embankment, London, W.C.

THE PREVENTION OF DUST DISEASES.

THE Society of Arts is once again directing its attention to the means of protection available against diseases due to the inhalation of dust Under the terms of the Benjamin Shaw Trust the council of the society has just offered a prize of a gold medal, or £20, for the best dust-arresting respirator for use in dusty processes and dangerous trades. Specimens with full description may be sent in to the society's offices in John-street, Adelphi, until Dec. 31st next. Competitors must themselves look to the securing of any patent rights which they wish to retain. There is, of course, no lack of respirators already, but such as are actually in use are open to objections, not all of them very reasonable, perhaps, which seriously diminish their value. Male workers object to respirators because of their general inconvenience, while factory girls, like girls more happily situated, are often ready to sacrifice health to appearances Possibly, too, the old objection that lessened risk means lowered wages has still some force. The society aims at finding a respirator which shall be simple in construction, light, cheap, and sightly, one which can be worn for hours without interference with respiration, and one which will not permit expired air to be breathed again. An apparatus satisfying all these requirements would have a certain sphere of usefulness, but we are a little doubtful whether the society is working on the right lines. Even supposing that a thoroughly efficient respirator impermeable to dust were devised we fear that the difficulty of getting work-people to wear it would not be easily overcome. Even if worn it would afford no protection against poisonous vapours and while it might limit the field of pneumonokoniosis and enterokoniosis it would have no application to the important group of lesions included under the term dermatokoniosis. The plan of carrying on the work before an upcast shaft so that dust and vapours are at once borne away by a current of air seems rather the one deserving of encouragement.

RECENT DISCOVERIES ON THE CAUSATION AND TREATMENT OF HAY FEVER.

Three interesting contributions to the subject of the causation and treatment of hay fever have been recently published. In the *Berliner Klinische Wochenschrift* of March 2nd Dr. G. Rosenfeld of Berlin refers to the question of hay fever as caused by the pollen of certain flowers and adds to the list a plant hitherto unrecognised as a cause—viz., the plantus occidentalis which is found in bloom in the neighbourhood of Stuttgart from the middle of May to the end of June, during which time hay fever is prevalent in that locality. The symptoms of hay fever caused by it are of the usual type and can be reproduced by experimental insufflation of the pollen into the nostrils. In the *New York Medical Record* of March 28th Dr. Raymond Wallace emphasises the fact that a neurotic predisposition to the affection exists in persons who develop hay fever. Persons who are "naturally highly strung, excitable, irritable, neurasthenic, having 'nerves' which are literally 'on the surface,' are those who are more liable to this affection than are the more phlegmatic types." The element of periodicity which is generally observed in attacks indicates that a psychical factor is concerned in the etiology of hay fever as exemplified in the case of a patient who has had attacks on August 15th of one year and who began to suffer in subsequent years on the same date. A neurotic young woman, aged 25 years, known to Dr. Wallace, suffers regularly from three attacks per diem on certain days. Thus upon arising from bed she always anticipates an attack and it always comes on unless she can abort it by firm pressure upon the upper lip. In the afternoon at the lunch hour a second attack follows and at night on retiring to her bedroom the third attack occurs. Another case was that of a young man, aged 30 years and of neurotic constitution. He suffers from hay fever in a regular and periodic fashion. Under medical treatment he does not have more than four or five attacks during the day. When at work in his office he is seldom troubled with an attack. But if he is spending the evening in society his mind dwells upon the possibility of an attack and of the embarrassment likely to be caused. He then has two or three attacks and is compelled to leave the room. Dr. Wallace has found that strong sunlight will in some persons provoke an attack of hay fever with its attendant symptoms of sneezing, vaso-motor congestion of the nostrils, and coryza, the attack being caused reflexly by excitation of the vaso-motor centres through the optic nerve, and in the same way it has been observed that dust, pollen, and certain odours may act through the trigeminal and olfactory nerves and provoke an attack. The psychical element is, concludes Dr. Wallace, a factor of growing importance in many diseases and in hay fever it plays an important part. Dr. Dunbar, the physician in charge of the Institute of Hygiene at Hamburg, states in the *Deutsche Medicinische Wochenschrift*, No. 9, 1903, that he has succeeded in isolating the toxic substance from the pollen of grasses which is capable of producing hay fever in predisposed persons. He was thus able to reproduce attacks of the disease in winter by subcutaneous injection of a minute dose of the same. This toxic substance is not the ethereal or oily constituent of the pollen grains but is apparently, adds Dr. Dunbar, an alkaloidal body. The attack of hay fever produced by it is intense. An attempt was made to produce an antitoxic serum from the blood of animals inoculated with this toxin. After some trials this was successfully effected and in the course of his experiments he inoculated eight patients with hay fever by instilling into the eye finely-ground pollen grains suspended in water. In every case the physical and subjective symptoms of hay fever were reproduced in varying degrees of intensity. The new serum was then tested by mixing some of it with the pollen and applying the mixture to the eye. "The eye itched slightly and appeared congested," but these symptoms disappeared in less than 30 minutes. The serum was equally effective against the pollen of various cereals.

COUNTY COUNCILS AND ISOLATION HOSPITALS.

The Essex county council is apparently the first to take advantage of the Isolation Hospital Acts and to make grants systematically to the authorities which have provided isolation hospitals. Prior to the recent amending Act grants could only be made to hospitals erected under the Act of 1893, now grants can be made to any hospital, but the sanction of the Local Government Board is necessary if the hospital is erected out of current rates and therefore without the plans having received the approval of that Board. At the commencement of this year the Essex county council announced that it was prepared to make grants towards the maintenance of isolation hospitals and that applications were to be made before a given date. Applications were received from 17 out of the 19 authorities in the county which had provided hospitals. All these hospitals have been examined and reported upon by the county medical officer of health and the marks awarded range from 55 to 100, the latter being the maximum. In awarding the marks every point in connexion with the position, construction, and administration of the hospitals was taken into account, together with the adequacy of the accommodation for the districts served. The sanitary committee has adopted these marks as the basis upon which the grant shall be made and recommended that each authority should receive 2*s.* per mark per bed for the year ending March 31st, 1903. The best hospitals will therefore receive a grant of £10 per bed and the worst £5 10*s.* It is probable, however, that next year some other basis will be adopted, as the difference between the various hospitals is not sufficiently well marked to encourage the improvements and reforms which the county council wishes to see carried out. Of the 17 hospitals to which grants have been allotted six were erected out of current rates and therefore the approval of the Local Government Board will be necessary before the grants can be paid. These hospitals are all wood and iron structures of a so-called "temporary" character and it remains to be seen whether the Board will sanction grants to such hospitals. The possibility of a refusal is evidently recognised, as the sanitary committee recommends, if the Board's sanction is withheld, that no grant should be made to any hospital. The table prepared by the county medical officer contains a mass of interesting information. Amongst other items it appears that the permanent isolation hospitals in Essex have cost from £360 to £700 per bed to erect, and that the establishment and patients' expenses have varied from £28 to £167 per bed There can be no doubt that the attention which the county council is giving to this subject will ultimately result in a great improvement in the hospital accommodation and administration throughout the county

A STATE REGISTER OF TRAINED NURSES FOR POOR-LAW INFIRMARIES.

AT a conjoint conference convened by the Matrons' Council and by the Society for the State Registration of Trained Nurses on May 8th at 20, Hanover square, W., a paper was read by Miss Eleanor C Barton, matron of the Chelsea Infirmary, entitled "State Registration of Trained Nurses as it affects Poor-law Infirmaries" The writer of the paper seemed to be in favour of the establishment by the State of a register of trained nurses, but she advanced nothing in the nature of argument to support such a procedure on the part of the Local Government Board beyond the conjecture that "when the State registration is inaugurated and the present chaotic state of the nursing profession is at an end the trained and disciplined nurses of our metropolitan infirmaries, who have as yet hardly been appreciated as they ought to be, will form a large and valuable addition to the nurses of Great Britain" The paper almost failed to carry out the promise of its title, for it did not—except in the extract given above—show the manner in which State registration of nurses will affect the Poor law infirmaries The paper touched lightly, from the nurses' point of view, upon the various branches of infirmary work and it also enumerated the great teaching opportunities afforded by the nursing of the many aged patients and others suffering from chronic diseases found in the wards of the modern infirmaries but rejected from the wards of the hospitals With the actual statements contained in the paper we are quite in agreement, but underlying those statements there appeared to be two assumptions upon each of which we may make a few comments The first was that the Local Government Board has the intention of establishing in the near future a system of State registration for nurses, and the second was that there will be an examination conducted by a State appointed board of examiners So far as we can ascertain there is of the intention mentioned no evidence whatever Neither has it yet been clearly shown that the public and the authorities of the two great nursing institutions (the hospitals and the infirmaries) have arrived at an agreement upon the desirability of State registration of nurses We have reason to believe that certain of these authorities hold the opinion that it would be unwise to inaugurate a system of registration until a defined curriculum and a recognised examination have been established Granting that the Local Government Board had taken in hand the formation of a State register of nurses, there would still be little probability of the creation of a State appointed board of examiners A review of the action of the Local Government Board during the past few years will lead inevitably to the conclusion that there exists no predilection for examinations of nurses on the part of that Board. Women who have worked for 12 months in the sick wards of a workhouse and have received a small, indefinite amount of teaching are, without examination, to be accepted as qualified nurses by that Board The superintendent nurses appointed under the General Order of 1897 are only required to have had a course of instruction for three years They may have availed themselves of their opportunities to the smallest possible degree, for they have no examination to pass Even if they have tried to pass one and failed they will still be eligible for the posts of superintendent nurses It is true that in the report of the departmental committee upon nursing in workhouses recently issued there is a recommendation of a defined curriculum with a final examination, but there is nothing beyond the recommendation and the matter is treated in a vague unsatisfying manner, wanting in all indications of the scope of the curriculum, without suggestions as to the persons who are to arrange the details of the scheme, but with merely a stipulation that there shall be two independent examiners, one of them being a lady from a recognised training school We leave the subject with the observation that the "present chaotic state of the nursing profession" (the wording is not ours) may be brought to an end, but the organisation of the chaos will require the concerted action of the nursing authorities of the large training institutions, the Local Government Board is not likely to initiate a scheme that will give general satisfaction but it may sanction one

PHLEBITIS OF INFECTIOUS ORIGIN IN CHLOROSIS

VENOUS thrombosis is a rare complication of chlorosis and its pathology is not fully known In some cases it depends on phlebitis, which in its turn has been ascribed to microbes They have been found in the blood of the inflamed vein and in the general circulation, but in no case have they been found in the venous lesion Hence the importance of the following case described at the meeting of the Société Médicale des Hôpitaux of Paris by M Paul Sainton and M Andre Jousset A well developed girl, aged 18 years, was admitted to hospital on Feb 6th A fortnight previously she noticed œdema of the right ankle Soon pain in the position of the external saphenous vein followed She was pale and the skin was waxy white, slightly tinged with yellow There was marked œdema of the right foot, ankle, and calf A systolic, musical, almost whistling murmur was heard at the right border of the sternum. Over the left jugular vein near the clavicle vibration could be felt and a loud continuous *souffle* could be heard The appetite was diminished and there was constipation On Feb 13th the right thigh was swollen and was five centimetres in circumference more than the left and its superficial veins were well marked The pain was increased and situated in the position of the deep vessels of the limb With this extension of the phlebitis the general condition, previously good, changed There were slight pyrexia (an evening temperature of 101 3° F), malaise, and anorexia The urine become darker and contained indican The blood was very pale and of specific gravity 1052 (instead of 1055) The red corpuscles numbered 2,300,000 per cubic millimetre there was poikilocytosis, and the hæmoglobin index was 0 62. The white corpuscles numbered 10 000 per cubic millimetre On Feb 20th the swelling extended from the thigh to the abdomen and the course of the internal and external iliac vessels was tender At the same time the œdematous skin became "marbled' with fine varicosities of ecchymotic appearance, especially at the upper part of the thigh On Feb 22nd the patient complained of a stitch in the right side and at the base of the lung behind slight dulness and diminished respiratory murmur were found. On the following day she complained to the patient in the next bed that "she could not feel her left leg and yet felt pain in it." She turned several times in the bed, suddenly placed her hand on her chest, complained of being stifled, had an attack of severe dyspnœa without cyanosis, and died in half an hour At the necropsy the thyroid gland was found to weigh 15 grammes (instead of 25); the thymus gland was persistent and weighed 13 grammes (the normal weight in an infant) The aorta was narrow. The right pleural cavity contained 300 grammes of serous effusion and there were numerous subpleural hæmorrhages. In the right lung was a large conical infarct two centimetres in length. In the right ventricle, in addition to post-mortem clots, was a small white elongated non-adherent clot. The pulmonary artery contained clots which ramified as far as the smallest branches to the left superior and right inferior pulmonary lobes. In the inferior vena cava thrombosis began gradually at a distance of seven centimetres from the sacral promontory. *Into the left iliac vein the thrombosis did not extend* far, but from the right the clot could be followed through the external iliac, femoral, popliteal, internal saphenous, and profunda veins. In the lower part of the femoral vein there was suppurative endophlebitis. The spleen was very large and diffluent. The affected femoral vein and the spleen yielded cultures of virulent diplo-staphylococci pathogenic to the rabbit. This case goes to show that the phlebitis of chlorosis, like other forms of phlebitis, is of microbial origin.

THE POSITION OF THE PUBLIC VACCINATORS.

THE following resolutions were unanimously passed after full discussion at a meeting of the Liverpool Medical Club last week. A representative body of medical men, including general practitioners, consulting practitioners, and public vaccinators, were present :—

1. That vaccination should be under the direct control and supervision of the Local Government Board in London.
2. That the post of public vaccinator should be a permanent appointment and that he be debarred from private practice, and that no certificate of successful vaccination shall be accepted from any private practitioner unless it comes up to the Local Government Board standard.
3 That all private practitioners be supplied free of charge with lymph from the Local Government Board on application on the prescribed forms.

Dr. J. Kingston Fowler will give the opening lecture of the summer session at the Hospital for Consumption and Diseases of the Chest, Brompton, on Wednesday, May 27th, at 4 P.M. The subject of the lecture will be the Diagnosis of Intrathoracic Tumours. We doubt if members of the medical profession sufficiently appreciate the value of the course of lectures delivered at this hospital. The amount of material at the disposal of the physicians and assistant physicians is unparalleled, so that the lectures are of an extremely interesting character. Their practical value is known to those who attend them but the attendance might well be increased.

Professor E. A. Schafer, F.R.S , will read a paper on the Phenomena attending Death from Drowning and the Means of promoting Resuscitation in the Apparently Drowned in the rooms of the Royal Medical and Chirurgical Society, 20, Hanover-square, W., on Tuesday next, May 26th, at 8.30 P.M. The paper will be illustrated by means of the epidiascope. The council will welcome to the meeting any member of the medical profession or medical student interested in the subject.

The Prince and Princess Christian of Schleswig-Holstein have made the following appointments: Sir Francis Henry Laking, Bart, G.C.V O., to be Physician in Ordinary, and Mr. William Fairbank to be Surgeon-Apothecary in Ordinary to their Royal Highnesses; and Mr. Willie Netterville Barron to be Surgeon-Apothecary to their Royal Highnesses' Household.

THE Medical, Surgical, and Hygienic Exhibitors' Association, Limited, will hold its Seventh Annual Exposition of Professional Exhibits at the Queen's Hall, Langham-place, London, W., on June 2nd, 3rd, 4th, and 5th, 1903, from 2 P.M. to 10 P.M. each day. Music will be rendered by a select orchestra every afternoon and evening.

AT the dinner of the Glasgow University Club, London, to be held on Friday, May 29th, the chairman, the Right Hon. George Wyndham, M.P., will be supported, among others, by Earl Lytton, the Right Hon. James A. Campbell, M.P., Mr. Scott Dickson, K.C., the Solicitor-General for Scotland, and Mr. W. J. Galloway, M.P.

THE KING has granted to Dr. Cyril Goodman His Majesty's Royal licence and authority to accept and to wear the Insignia of the Third Class of the Imperial Ottoman Order of the Medjidieh, conferred upon him by His Highness the Khedive of Egypt, in recognition of his valuable services to the Egyptian Government.

MEETINGS of the Central Midwives Board were held on May 7th, 12th, and 14th. The drafting of the rules under Section 31 of the Midwives Act, 1902, was completed and the secretary was instructed to forward a copy to the Privy Council for its approval, together with some draft "Suggestions to County Councils."

THE forty-third annual dinner of King's College, London, will be held at the Holborn Restaurant, on Monday, June 22nd, the Bishop of Exeter in the chair. All communications should be addressed to Mr. John Chapman, honorary secretary of the committee.

THE annual conversazione of the Medical Society of London was held on May 18th, Mr. A. Pearce Gould, the President, being in the chair. The oration was delivered by Sir William H. Bennett, K.C.V.O., and is published in full on p. 1423 of our present issue.

AMONGST the latest contributions received at the Bank of England for King Edward's Hospital Fund for London is the sum of £100 from the executors of the late Archbishop of Canterbury for annual subscription payable in 1902.

LEPROSY AND FISH-EATING.

LORD GEORGE HAMILTON, M.P., Secretary of State for India, presided over a meeting held on May 15th at the Medical Graduates' College and Polyclinic, Chenies-street, London, W.C., to hear an address by Mr. Jonathan Hutchinson on the results of his recent journey to India for the investigation of leprosy. In opening the proceedings he referred to the facts that leprosy had largely diminished in India during recent years and that the Commission on Leprosy which was appointed some years ago to inquire into the causation of the disease was not unanimous in its conclusions.

Mr. HUTCHINSON, of whose address the following is an abstract, said : My Lord, Ladies, and Gentlemen,—May I in the beginning state that there is in connection with this institution a standing committee for the investigation of leprosy and that that committee will meet on May 21st? I went to India with a very strong conviction which I have held for many years to the effect that the fish theory was the only one which would explain the prevalence and the disappearance of leprosy in various places. The commission to which your lordship has alluded was formed in 1890 and the members visited India. They did not neglect the investigation of the question of fish-eating and they returned a somewhat adverse verdict to it based on the fact that a certain number of lepers denied ever having eaten fish. My object in going to India was to see whether that objection could be got over. Since this commission visited India the fish hypothesis has assumed a somewhat modified aspect in that we fully recognise what is called commensal communication of leprosy—namely, that it is communicable by food from the leper's hands conveying the bacillus as it seems directly into the stomach from the leper's hands. That tends to explain exceptional cases in which a leper may deny that he has ever eaten fish, for he may have acquired his leprosy by this commensal communication without eating fish. Again, there are innumerable different languages in India and the patients very often misunderstand what is said to them. If asked blankly, "Have you eaten fish?" they might suppose that the question probably was, "Have you eaten fish taken out of the stream?" They might have *entirely forgotten the peculiar appearance that fish is apt* to assume. Under certain dried conditions fish does assume very different appearances, and might very often not be recognised as fish. Here is a specimen of Indian fish preserved in such a way that any person might eat it without knowing that he was eating fish. *Moreover the* number of different names and words which are applied to dried and salt fish is very great. I found at several places that not only amongst the patients, but also amongst those who were their superintendents and caretakers, the idea *of salt fish meant fish taken out of the salt sea. That was* not what I meant; I meant any kind of fish preserved in salt. I very much wished to excite popular interest and inquiry into the subject. Therefore I wrote letters to the Indian medical journals and to the Indian press generally—that is *to say, the non-medical press—to state what my opinions* were with regard to leprosy and asking for information from all quarters. I was anxious to direct public attention to the dangers of eating bad fish and in that way to diminish the prevalence of leprosy, even though it *might be without convincing any medical friends, or all of* them at any rate. I addressed a letter to the presidents of all the medical colleges in India and I asked to be permitted to hold in their colleges a meeting to which all medical men in the district should be invited and before *which I should expound my views. In every place the* president of the medical college responded to my request and convened a meeting and at each of these I gave an address. In this way there was full opportunity for any criticism.

Various persons have said to me over and over again: "Leprosy disappears before civilisation; you need not trouble yourself about fish." My reply is that it recedes under many conditions of advancing civilisation, but not under all. For instance, there is plenty of leprosy in the West Indian Islands *and in* Spain *and Portugal,* while in Cape Colony it is steadily advancing, and if there are benefits to be derived from mere segregation Cape Colony ought to have felt them. The advocates of the fish theory allege broadly that the one factor of importance in the *decline of leprosy* is the disuse of badly *preserved fish*, and that the advance of civilisation acts by supplying different articles of food and thus diminishing the consumption of bad fish. I have often been asked why decomposing meat might not also be a c[illegible]d the reply [illegible]as long been habitual to eat decomposing meat but in which no leprosy occurs. A Kaffir in Natal will eat the flesh of a dead ox, however advanced in decomposition it may be, but from time immemorial they had no leprosy in Natal until they had communication with Cape Colony, where the people eat salt fish, and that is within the last 60 years. The fish hypothesis assumes that really fresh fish and really well-preserved fish are both alike innocuous, and that cured or uncured fish in commencing decomposition may occasionally contain ingredients which become effective in the causation of leprosy. It is not the excessive use of fish, but the accidental reception of a specific ingredient in connexion with fish which determines the occurrence of the disease. The belief that leprosy is communicated by direct inheritance was entirely discredited by the evidence of the commission and there is very much other evidence which leads us to attach no importance to the belief that it is so communicated. The hypothesis of commensalism is very much more plausible. At Lahore I saw a baker who came amongst the general out-patients of the hospital for advice because he had got very sore hands and this was a great impediment to him in making bread He was a leper unquestionably, and his hands had leper's sores upon them. We can see at once the possibility of contagion in that direction.

Having made these explanations, I now proceed to my argument, one point of which will be that there is no part of India in which the fish hypothesis is not possible. My journey was on the south-east coast, stopping at Madras, Calcutta, Darjeeling, and then across the whole north of Hindustan, going as far north as Lahore and passing down to Mysore and Bombay. *Leprosy is scattered all over India;* there is no place which is absolutely free from it, and it prevails to a very large extent excepting in a very few places. *Tables have been prepared which show that five per* 10,000 is the average prevalence of leprosy throughout the whole Indian population. There are no places in India where the fish hypothesis is impossible on account of there being no fish to eat. I will read you a brief quotation from *the Imperial Gazetteer in India, by Sir William Hunter. He* has written as follows: "All the waters of India, the sea, the rivers and the tanks, swarm with a great variety of fishes, which are caught in every conceivable way, and furnish a considerable proportion of the food of the poorer *classes.* They are *eaten fresh* or as *nearly fresh* as may be, for the art of curing them is not generally practised, owing to the exigencies of the salt monopoly." Two districts, however, were pointed out to me as being those in which the fish hypothesis would not apply on *account of the great dif*[illegible] smallness of its supply. T[illegible] It is an inland district sit[illegible] sandy district and over anc[illegible] by men who were well experienced and had lived in that *neighbourhood that if I would go to Chota Nagpur I should* find a district in which leprosy prevailed and fish was not obtainable. The other locality of which the same thing was asserted was the sub-Himalayan country in the north of Hindustan. I was assured that the people do not get fish *there and yet they have leprosy. The Chota Nagpur* district is some distance from the sea and has but few rivers. Its leper asylum is a little town. I went there, of course, and met the Rev. Dr. Harn, a medical doctor as well as a theological one, and I said that my object *in coming was to question those of the lepers in the* asylum—more than 500 in number—who said they had never eaten fish. Dr. Harn replied: "I have not one in the asylum who has not eaten fish. They have all eaten fish habitually." Dr. Harn's resident medical officer, who was *more familiar with the lepers themselves than Dr. Harn* himself, added to this. "Not eaten fish? Why, a great many of them think that fish has caused it. Numbers have left off eating fish in the belief that it had been the cause of the leprosy and made it worse." So much for Chota Nagpur. *Why had my friends who said that there was no fish been so* certain? They had travelled through the district rapidly in the dry season and they did not realise that in the rainy season every pool and river and brook was full of water and that there was plenty of fish to be got. In this leper asylum, *of which it was asserted* in Calcutta that none of the inmates had eaten fish, the fact was that fish was given regularly for meals. And at an adjacent asylum under the management of missionaries they said: "Yes, there is plenty of fish-eating here and we get our fish from Puralia, and we cannot conceive how anyone could have told you that." That must be taken as a type of a great many places where there is an elevated sandy district. I visited Puralia market and I saw the fish there. As to the sub-Himalayan districts, in talking with various sportsmen in the army and with people who had been frequently there and had themselves been accustomed to fish they said to me: "No fish in these sub-Himalayan districts? The streams all swarm with them. All the natives catch fish and there is plenty of fish." One gentleman said: "I go to fish there myself and I assure you the men are all very eager to eat fish, and they take the excess of any fish I catch and they salt it and keep it and then eat it in a condition in which I assure you I would not eat it." *Dr.* Hooker, who travelled several years in Sikkim (and that is in the Himalayan districts very nearly, a little to the west of Darjeeling), has stated: "On Kalapance Road (right under the foot of the Himalayan mountains) we passed crowds of market people laden with dried fish in a half putrid state which scented the air for many yards; they were chiefly carp caught and dried at the foot of the hills." I went to Darjeeling myself and there I found abundant fish in the market at a very considerable elevation above the sea and in full sight of the Himalaya mountains. The commission also reported that it was astonished at finding there was plenty of fish to be got in this district. I must now pass on to ask if there is any religious creed in India to which the suspicion of eating fish will not apply. The chief sects in India—I must not attempt detail because there are so many sects—are the Hindoo and the Mahomedan. The Mahomedan will eat anything except pork and one or two other white meats; *for instance,* I think he will not eat hare, but he will eat fish freely. A Hindoo lives to a very large extent on rice. He would not eat any flesh of cows; that would violate a sacred rule, but he will eat almost any other kind of meat and he will eat fish, although he has a sentimental feeling that it is better and more virtuous to live on vegetable than on animal food. Certain forms of Brahminism fully allow of fish-eating and it is enjoined in the ritual that they shall eat fish at certain times. The very highest caste Brahmins will not eat animal food, but even amongst them the free use of animal food, including fish, is allowed up to the age of nine years, when the children assume the sacred thread, and afterwards they must not eat animal food. Again, the Jains form a very ancient sect, as old as Buddhism, and they are rigidly against the taking of life in any form. They go about with a little piece of muslin in front of their mouths to prevent insects getting into their mouths, not that they wish to protect themselves against the disagreeableness of the insects but they wish to protect the insect's life. Yet I think he would be a bold man who felt sure that no Jain ever ate fish. Hindoo sentiment with regard to fish may be said to be somewhat thus: That every Hindoo would prefer to say that he had not eaten fish, and if you go to a leper asylum to question them as to whether they have done so, it is very much as if you should institute an inquiry as to spirit-drinking in an English asylum. Therefore, if you ask Hindoos in a leper asylum as to fish-eating you must expect various replies, according to the moral courage of the man and according to what he thinks you want him to say. Whilst I was at Calcutta I received a postcard stating that if I would go to a certain asylum in the North of the Punjab district (Nicodar) I should find an asylum containing 100 persons not one of whom had ever tasted dried fish. I consulted the Viceroy about the matter and he very kindly sent a telegram asking that I should be supplied with full information. The resident medical officer therefore prepared a full statement, giving the names of all the lepers in the establishment, stating their age, sex, whether they had relatives who had leprosy, and giving one column, which was the most important of all, headed, "Have you ever eaten fish?" Now, in this schedule which was presented to me when I arrived at the asylum there were 40 men put down as not having eaten fish. So I thought that I must give up the fish theory altogether if this could be substantiated I therefore proceeded to question the inmates individually. The first man who was brought before me firmly and persistently avowed that he had never eaten fish. He admitted that his father and mother ate fish habitually and that there was plenty of fish in his village, that his brothers and sisters ate fish, but that he had never tasted it because he did not like it. I then asked the resident medical officer to let me see another, but he replied: "There is not another, they all say they eat fish." That was the fact, there was not another man to be produced to say that he had not eaten fish. This, however, did not apply to the women. A woman who has said a thing will stick to it and all these women declared that they had never eaten fish. Therefore it was quite possible that in all of them it was a matter of commmensal contagion. At Bombay I was supplied with a report of the particulars of the Bombay Leper Asylum, the Matunga Asylum, and in this report among the columns showing the religion or race to which the patients belonged there was a column headed "Salsette Christians," a term which simply means the Christians living in the island of Salsette, an island close to Bombay and a great fishing centre. The Salsette Christians are Roman Catholic Christians. They were converted in the days of the Portuguese possession by the Portuguese Jesuits and they have continued ever since as a sect. The Bombay Leper Asylum receives patients from all parts of the Presidency without any selection and it has 500 inmates. A great number of them are Hindoos, the Hindoos being in superior numbers there, but the Salsette Christians in the asylum were very much in excess of their ratio to the population. The Calcutta asylum, the Madras asylum, and the asylum at Tantaran all show just the same sort of thing—an enormous preponderance of Christians. Of course there is a fallacy there, as there is a fallacy in all statistics, that inmates of the asylums may not represent the prevalence of leprosy in the community, but it is perfectly fair to take the records of the asylums as some basis for estimation of the presence of leprosy in the whole of the population. Let it not be suggested that there is anything in the habits of a converted native which tends to degradation. The change which native Christians experience so far as leprosy is concerned is, I am convinced, simply one of diet. In the case of all of them the race prejudice against fish is removed and in the case of the Roman Catholics it is replaced by a sort of compulsion to eat it. Having thus reviewed the evidence which I have accumulated in support of my theory concerning the causation of leprosy I may add that in my opinion the removal of the salt tax will be an immense boon to the community in various ways and that it will tend to prevent the prevalence of the disease.

Sir William H. Broadbent moved a vote of thanks to Lord George Hamilton for presiding. This was seconded by Dr. C. Theodore Williams and carried.

Lord George Hamilton admitted that the salt tax was heavy and pointed out that it must remain until some other source of revenue could be found. Though the tax had been reduced he believed that the extra consumption which the reduction would lead to would prevent any loss in the revenue. The heavy salt tax had, in his opinion, restricted fish-curing but he had not previously realised that there was any connexion between a heavy salt tax and the prevalence of leprosy.

The proposed discussion was adjourned to the next meeting of the Standing Committee of the Polyclinic on Leprosy.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

An extraordinary Comitia was held on May 14th, Sir William Selby Church, Bart., K.C.B., the President, being in the chair. Dr. W. H. Allchin acted as registrar in the absence through illness of Dr. E. Liveing.

The following gentlemen who had been elected at the previous Comitia were admitted as Fellows of the College: Dr. A. P. Beddard, Dr. E. Cautley, Dr. J. S. Collier, Dr. B. E. Dawson, Dr. E. Goodall, Dr. W. Gordon, Dr. A. M. Gossage, Dr. L. Humphry, Dr. R Hutchison, Dr. J. A. Lindsay, Dr. A. Morison, Dr. F. J. Poynton, Dr. G. A. Sutherland, Dr. W. W. H. Tate, and Dr. StClair Thomson.

The Registrar (Dr. Allchin) proposed, and the Second Censor (Dr. G. V. Poore) seconded, the enactment for the first time of the following by-law:—

That Dr. George Francis Angelo Harris, elected a Fellow on April 30th, being resident in India, be admitted *in absentiâ*, any by-law to the contrary notwithstanding.

A communication was received from the Liverpool University Committee requesting the College to appoint a representative to be a member of the court or supreme governing body of the University.

The President moved from the chair that the request be granted and the proposal having been accepted by the College nominated the treasurer (Sir Dyce Duckworth) as the representative of the College.

Sir Dyce Duckworth consented to act.

Dr. P. H. Pye-Smith, the representative of the College at the recent International Congress of Medicine held at Madrid, presented his report and a vote of thanks was given to him for his services.

The President then dissolved the Comitia.

MEDICINE AND THE LAW.

The Medical Profession and Proprietary Medicines.

A very curious dispute has been ventilated at Liverpool in the court presided over by Sir Samuel Hall, K.C., vice-chancellor of the County Palatine of Lancaster. A firm of wholesale druggists sued a manager in their employment for moneys which they alleged that they had paid to him for the benefit of the Liverpool Throat Hospital, of which he had been for some years honorary treasurer. The moneys arose from royalties upon certain throat pastilles prepared by the druggists according to a formula of Mr. John Bark who, being a member of the staff of the hospital, had apparently handed the prescription to Mr. Jones, the honorary treasurer. The wholesale druggists arranged to produce and to sell the pastilles, paying a royalty of 6*d*. per pound to Mr. Jones, and the sales were such that the royalty in a single year amounted to £800. The agreement under which the payment of the royalty was made formed the original subject of the dispute, the druggists (Messrs. Evans and Sons) alleging that they paid it to Mr. Jones as treasurer of the charity, while Mr. Jones contended that he accepted it as proprietor of the formula which he claimed to have received as a gift from Mr. Bark. It was found by the court on a previous occasion that Mr. Jones had received the money in his hands in a fiduciary capacity and the recent hearing was in consequence of the medical men connected with the hospital, of which some of them were apparently trustees, pointing out that they were unable to give their services to a charity deriving profits from the sale of a proprietary medicine Considerable discussion appears to have taken place and an injunction was even sought against the medical men to restrain them from withdrawing, but ultimately a new scheme for the disposal of the fund was ordered to be drawn up with the consent of the Charity Commissioners and presumably the trustees who will eventually handle it will not be members of the medical profession. The report in the *Liverpool Post* of the proceedings upon the second occasion on which the matter came before the court does not afford a detailed account of several points which might be of interest to the medical profession. A good deal, however, would seem to have been said in the course of the discussion as to the importance of maintaining the secret of the prescription undivulged and the representative of the Attorney-General of the Duchy of Lancaster seems to have argued that medical men who were trustees for the charity were bound, in conformity with the contract under which the druggists made the pastilles, not to publish the formula. It would appear, therefore, that it was found that the druggists merely made up a prescription and sold it under a promise that as far as secrecy could give them a monopoly they alone should make the articles in question. This would be easier to understand than the proposition that Mr. Bark had or had ever claimed to have any proprietary right in a formula of his devising, or that any such alleged right had been transferred to Mr. Jones either as trustee or otherwise. The medical men connected with the hospital acted with obvious propriety.

Abortion and Murder or Manslaughter.

An abortionist was recently convicted on the Northern Circuit of manslaughter and sentenced to 15 years' penal servitude. The precise terms in which Mr. Justice Lawrance summed up the case to the jury are not yet fully reported, but he appears to some extent to have followed the summing up of Mr. Justice Bigham in R. v. Whitmarsh (62 Justice of the Peace, 711) and to have instructed the jury to the effect that if they should be of opinion that the prisoner could not as a reasonable man have expected death to result from his act they might find a verdict of manslaughter. A jury is prone to avail itself in such a case of any loophole which will enable it to acquit upon the capital charge. It is worthy of note that if Mr. Justice Bigham's statement of the law is correct he qualified it with reference to the case before him by others which clearly intimated to the jury that it was their duty to convict of murder. He said, amplifying his other observations, "If they should be of opinion that the prisoner could not as a reasonable man have expected death to result from his acts they might find a verdict of manslaughter"; and in another passage, "If the prisoner as a reasonable man could see no possibility of death, then you can find a verdict of manslaughter," and he spoke of the extreme remoteness of the possibility which would justify the milder verdict. In this case the jury found Whitmarsh guilty of murder.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on May 14th, Sir HENRY G. HOWSE, the President, being in the chair

Sir Francis Henry Lovell, C.M.G., was introduced, signed the by-laws, and was admitted a Fellow of the College.

Mr. Thomas Crisp English was introduced and the President handed him a cheque for the amount of the Jacksonian prize for the past year together with a document declaratory of the award.

Mr. Louis Bathe Rawling was introduced and the President handed him a cheque together with a certificate recording the Council's appreciation of the merits of his dissertation for the Jacksonian prize.

Mr. Kenneth Weldon Goadby was introduced and the President handed him a cheque for the amount of the John Tomes prize together with a document declaratory of the award.

It was resolved that diplomas of Membership should be issued to 109 successful candidates.

As recommended by the Court of Examiners an alteration was made in the regulations for candidates for the Diploma of Fellow so that Paragraph 7, Subsection II., Section III. shall read:—

> 7. Of having attended a course of lectures on biology at a recognised medical school or of having passed an examination in this subject at a recognised university.

It was resolved to issue diplomas of the Licence in Dental Surgery to 54 successful candidates.

A letter was read from the London County Council asking the College to suggest the names of well qualified pathologists to make post-mortem examinations and to give evidence in special inquest cases. In reply it was resolved to send the following letter:—

> The Council of the Royal College of Surgeons of England, while agreeing with the London County Council that it is desirable that pos [illegible] be [illegible] in [illegible]

The President was requested to communicate with a Member of the College to whose circular attention had been drawn.

A letter was read from Mr. G. H. Makins and Mr. F. C. Abbott, honorary secretaries to the MacCormac Memorial Committee, stating that a marble bust of the late Sir William MacCormac had been executed by Mr. Alfred Drury, A.R.A., for St. Thomas's Hospital and that the subscribers desired to offer a replica of the bust to the Royal College of Surgeons of England in commemoration of Sir William MacCormac's long and honourable connexion with the College. The offer was accepted with the best thanks of the Council to the subscribers.

A letter was read from Mr. Edmund Owen reporting his attendance as the representative of the College at the Fourteenth International Congress of Medicine held at Madrid in April last. A vote of thanks was given to Mr. Owen for his services.

A letter was read from the secretary to the Liverpool University Committee stating that the Lords of the Privy Council had advised His Majesty to grant a charter incorporating a university in Liverpool and asking the Council of the Royal College of Surgeons of England to appoint a Member of the Court (the supreme governing body of the University) as provided in the charter as drafted for the approval of His Majesty.

The PRESIDENT stated that a vacancy on the Court of Examiners occasioned by the retirement of Mr. R. J. Godlee would be filled up at the ordinary meeting of the Council in June.

A committee was appointed, in response to a request of the Royal College of Physicians of London, to confer with representatives of that College as to any alterations that may be desirable in the regulations for the First Conjoint *Examination.*

A letter was read from the General Medical Council, accompanied by a copy of the report of the visitors on the final examinations of the Conjoint Board. The report was referred to the committee of management to consider and to report.

PREVENTION OF CONSUMPTION AND OTHER FORMS OF TUBERCULOSIS.

STAFFORDSHIRE.

AT a meeting of the sanitary committee of the Staffordshire county council held last February it was resolved—

> That the county medical officer of health be instructed to report upon the need in this county for the provision of a sanatorium or sanatoria for the treatment of phthisis and as to the steps, if any, which the county council may advantageously take in order to further or promote a scheme having such an *object in view.*

Dr. George Reid, the county medical officer of health, has therefore now presented a report, in the early part of which he states that in Staffordshire, excluding county boroughs, the mean annual number of deaths from tuberculosis during the past ten years was 805 and as the mean duration of the illness when fatal is from two to three years there were probably at least 2000 patients in the administrative county. Evidence of the preventable nature of the disease was afforded by the fact that during the last 40 years and coincidently with the growth of sanitation the death-rate from this cause in England and Wales had decreased greatly. In the period 1861-65 the tuberculous deaths per million persons living were 2526, but in the period 1881-85 the proportion fell to 1830 and in 1891-95 it further fell to 1461. What was known as the open-air treatment had been practised on a considerable scale for a good many years in Germany and some three or four years ago the movement extended to this country. Dr. Reid here quoted a table which was included in the appendix to Dr. A. Latham's prize essay and which will be found in THE LANCET of Jan. 3rd, 1903, p. 30, col. 1. He then described the details of a scheme which had been under consideration by the county council of the West Riding of Yorkshire, according to which for a hospital to accommodate 50 patients (35 men and 15 women) the initial establishment cost would be £26,100 and the annual expenditure would be £3511.

If a county council desired to take part in the providing of a hospital there were several methods which it might adopt. For example, its machinery might be used merely in an initial capacity with the view of obtaining what was wanted by the help of philanthropic persons, as was done in Worcestershire. Or it might endeavour to induce local authorities to unite for the purpose, with or without a promise of financial help from the county funds. On the other hand, the council might undertake the whole responsibility, structural, administrative, and household, and provide the necessary funds from the county rate. Dr. Reid did not advocate any of these arrangements. He, however, strongly recommended a scheme which he had outlined a considerable time ago and which was similar to the system afterwards approved of by the West Riding county council By such a scheme every authority in the administrative county, through the county rate, would contribute *pro rata* to the cost of the hospital and each authority might make use of the hospital on guaranteeing the payment of, say, £1 per patient per week, or possibly less. It would rest with the local authority as to whether it would find the whole of this amount, or whether part or the whole of it might be charged to the patient or subscribed by charitable persons, and in all probability funds would also be forthcoming from sick clubs.

It was desirable on economical grounds that the whole county should be served by one institution. The ideal site for the purpose would be on the south-western slope of a hill where the subsoil was dry and porous. The majority of the patients should have separate sleeping-rooms, but there might be one or two rooms with two or three beds in each. Whether the structure should be of a permanent or temporary character was a question about which there was much difference of opinion. Dr. Reid considered that a hospital containing 50 beds and standing on a site of 30 acres might be built and furnished for a capital expenditure of £19,900 and that the annual expenditure might be put at £2407. To this estimate there would have to be added the sum of £1 per bed per week (£2600 a year), for which it had been already suggested that the local authorities should be responsible. He was of opinion that the value of sanatoriums in the modern treatment of pulmonary tuberculosis was not merely curative for they were also educational centres where patients were taught the simple rules by which their recovery might be promoted and by which the risk of infection being conveyed to others might be avoided. To accomplish this much a residence in the institution of from six to eight weeks would probably suffice and in that way an institution of 50 beds would be capable of receiving 300 patients annually.

MANCHESTER.

At the annual meeting of the friends of the Manchester Hospital for Consumption good progress with the building of the Crossley Sanatorium at Delamere was reported. It was also stated that the first £50,000 of the £100,000 wanted as an endowment had been reached One or two points of interest came out in the course of the proceedings. The large proportion of "housewives" among the 11,300 outpatients was referred to as showing the pernicious effects of in-door employments and Mr. Crossley went on to speak of one of the important, but as yet unsolved, problems—namely, the future of the patients after leaving hospital and the finding of suitable employment. One scheme he had dimly in his mind was to send them across the sea, for he was told that in Tasmania "land was cheap and consumption unknown." There was an urgent necessity for continuing the open-air life that had led to cure, but in the case of town populations the problem seemed to be almost insoluble.

THE ROYAL SOCIETY'S CONVERSAZIONE.

SIR WILLIAM CROOKES'S DEMONSTRATION OF THE EMANATIONS OF RADIUM.

THE contributions to science during the past year have been of more than ordinary interest and the result has been a more than usually attractive exhibition in the rooms of the Royal Society on the occasion of the annual conversazione which was held on May 15th. The fact that the greater part of the council room, duly darkened, was allotted to Sir William Crookes made it fairly certain that this distinguished chemist was taking the opportunity of demonstrating the properties of that mysterious substance radium. The exhibit attracted the greatest interest and in spite of an alteration having been made this year for the first time in the day of holding the conversazione there was a very large and brilliant gathering present, the company being received by the President, Sir William Huggins, K.C.B.

In reviewing in our columns the work contributed by scientific men during the past few years we have frequently had occasion to direct our readers' attention to the remarkable results promised by the study of that property of certain elements known as radio-activity of which radium is now the most remarkable example. We may regard Sir William Crookes's recent statement as the most authoritative announcement upon this subject and the following is his striking description given to the Fellows of the Royal Society and their friends during the demonstration. The emanations from radium, he says, are of three kinds, one set is the same as the cathode stream now identified with free electrons—atoms of electricity projected into space apart from gross matter—identical with matter in the fourth or ultragaseous state, Kelvin's satellites, Thomson's corpuscles or particles, disembodied ionic charges retaining individuality and identity. Electrons are deviable in a magnetic field and are shot from radium with a velocity of about two-thirds that of light, but are gradually obstructed by collisions with air atoms. Another set of emanations from radium are not affected by an ordinarily powerful magnetic field, and are incapable of passing through very thin material obstructions. They have about 1000 times the energy radiated by the deflectable emanations. They render air a conductor and act strongly on a photographic plate. These are the positively electrified atoms Their mass is enormous in comparison with that of the electrons. A third kind of emanation is also produced by radium besides the highly penetrating rays which are deflected by a magnet: there are other very penetrating rays which are not at all affected by magnetism. These always accompany the other emanations and are Roentgen rays—ether vibrations—produced as secondary phenomena by the sudden arrest of velocity of the electrons by solid matter, producing a series of Stokesian 'pulses' or explosive ether waves shot into space. These rays chiefly affect a barium platinocyanide screen and only in a much feebler degree zinc sulphide. Both Roentgen rays and electrons act on a photographic plate and produce images of metal and other substances inclosed in wood and leather and shadows of bodies on a barium platinocyanide screen. Electrons are much less penetrating than Roentgen rays and will not, for instance, show easily the bones of the hand. A photograph of a closed case of instruments is taken by the radium emanations in three days and one of the same case by Roentgen rays in three minutes. The resemblance between the two pictures is slight and the difference great. The actions of these emanations on phosphorescent screens is different. The deflectable emanations affect a screen of barium platinocyanide strongly, but one of Sidot's zinc sulphide only slightly. On the other hand, the heavy, massive, non-deflectable positive atoms affect the zinc sulphide screen strongly and the barium platinocyanide screen in a much less degree.

If a solid piece of radium nitrate is brought near the screen and the surface is examined with a pocket lens magnifying about 20 diameters scintillating spots are seen to be sparsely scattered over the surface. On bringing the radium nearer the screen the scintillations become more numerous and bright, until when close together the flashes follow each other so quickly that the surface looks like a turbulent luminous sea. It seems probable that in these phenomena we are actually witnessing the bombardment of the screen by the positive atoms hurled off by radium with a velocity of the order of that of light; each scintillation rendering visible an impact on the screen and becoming apparent only by the enormous extent of lateral disturbance produced by its impact. In the same way, individual drops of rain falling on a still pool are not seen as such, except by reason of the splash they make on impact, producing ripples and waves in ever-widening circles. A convenient way to show these scintillations is to fit the blende screen at the end of a brass tube with a speck of radium salt in front of it and about a millimetre off and to have a lens at the other end. Focussing, which must be accurately done to see the best effects, is accomplished by drawing the lens tube in or out Sir William Crookes proposes to call the little instrument designed for this purpose the "Spinthariscope," from the Greek word *σπινθαρίς*, a scintillation.

A very interesting experiment was shown by the Rev. F. J. Jervis Smith demonstrating the effects of a high-pressure spark gap used in connexion with an inductor of the Tesla type and also in connexion with a radiator of Hertzian waves. The discharge at the terminals is augmented when the air or gas in the spark-gap globe is subjected to pressure by means of a pump. The spark readily perforates and cuts plate-glass placed in oil with conductors on each side, but intense as the spark is it has very little physiological effect—that is to say, only a pricking sensation is experienced when the spark passes between the terminal and the knuckle of the hand. A simple device for controlling and regulating spark discharges was exhibited by Mr. Alfred Williams. In his experiments he showed how by the use of a shunt or of plates of high resistance the field in a spark-gap can be so influenced that the discharges are made more regular and placed under better control for therapeutic and wireless telegraphy purposes. Sir Oliver Lodge and Dr Alexander Muirhead demonstrated the working of their new coherer as applied to wireless telegraphy. The coherer is automatic and consists of a steel wheel which rotates so that its edge touches a pool of mercury through a film of oil. An excellent method for the detection and estimation of minute quantities of arsenic in beer and brewing materials was demonstrated by Professor Thorpe of the Government Laboratory and his assistants. The apparatus consists of an electrolytic cell in which the hydrogen is generated from acidulated water to which has been added the suspected beer by means of the electric current. A little amyl alcohol is added to prevent frothing. The gas is subsequently dried and passed through a heated glass tube when the arsenic is deposited.

Dr. Allan Macfadyen and Mr. Sydney Rowland demonstrated the methods which they have used for the past four years in studying the intracellular toxins and ferments of bacteria and other cells. From these and other researches it has become evident that there exists a distinct class of toxins and ferments which are contained and operate within the cell or bacterium in contra-distinction to the now well-known class of toxins which are extracellular—i.e., *extruded during life* from the cell into the surrounding medium. To this latter class belongs the diphtheria toxin which has been so successfully used in the preparation of diphtheria antitoxin. The practical utility of investigating these intracellular toxins has already become evident in the preparation from the intracellular toxin of the typhoid bacillus of a serum having antitoxic value as regards this toxin. The method employed in obtaining these intracellular toxins consists in mechanically breaking up the bacteria when in the *brittle* condition produced by immersion in liquid air The use of this reagent has the additional advantage of preventing chemical change during the process. In short, the process may be described as producing a *devitalised toxin* while the bacillus is in a condition of *chemical anæsthesia*. The apparatus concerned in this interesting and important research was shown.

Professor F. D. Trouton showed an ingenious arrangement by which the hygrometric state of the air could be gravimetrically recorded directly. When the moisture in the air varies or the temperature changes the weight absorbed by a piece of flannel changes in proportion to the hygrometric state of the air but not to the amount of moisture present. This alteration in weight can be shown by the movement of the arm of a balance from which the flannel is suspended and thus the hygrometric variations may be recorded. [illegible] was demons [illegible] with chlorof [illegible] of calf vacci [illegible] chloroform escapes automatically from the emulsion so that the vaccine is never in contact with a stronger solution of chloroform than 1 in 200. The value of this method has been practically demonstrated. The use of vaccines freed from all extraneous germs and after all the traces of chloroform have been removed has given results for vaccination and revaccination of a very satisfactory kind. By this method vaccine free from extraneous bacteria can be distributed for use, it is stated, within 24 hours of its collection from the calf. This fact is of the utmost importance should the demand for vaccine, as during the occurrence of small-pox epidemics, be very great. Dr. W. J. Russell, exhibited a number of photographs of dust deposits formed upon glass plates which were left at rest for a few minutes at a slightly higher temperature than that of the surrounding atmosphere. The dust took many beautiful patterns chiefly of the double diagonal type Speaking of dust mention should be made of the samples of volcanic dusts exhibited by the West Indies Volcanoes Committee of the Royal Society. There was a very interesting collection of relics and photographs on view illustrating the late eruptions in St. Vincent and Martinique. Mr. S. G. Shattock showed an interesting example of true (glandular) hermaphroditism in a domestic fowl. The comb and wattles of the bird shown were male, while the tail and plumage in general were female. The section showed a left oviduct and two reproductive glands The right lesser gland exhibited testicular tubuli, some of which contained spermatozoa; the left gland contained inactive testicular tubuli and an ovum. Dr. Aldo Castellani exhibited a specimen of trypanosoma found by him in the cerebro-spinal fluid from patients suffering from sleeping sickness in Uganda. In the committee-[illegible] was given of the new incandescent oil [illegible] ity [illegible] on. [illegible] and [illegible] t is [illegible]

Demonstrations were given by means of the electric lantern during the evening by Sir Benjamin Baker who exhibited a series of lantern slides illustrative of the Nile Dam works Professor Harold B. Dixon also used the lantern for projecting on the screen his interesting photographs of explosion flames taken on very rapidly moving films. The genesis of the explosion waves as the flame travelled from the point of ignition and the influence of reflexions from the ends of the tube could readily be seen. Photographs of sound waves moving through the explosion flame were also shown, the movement enabling the approximate temperature of the flame to be calculated.

THE ARMY MEDICAL SERVICES.

WE are authorised to state the following facts for the information of intending candidates for the Royal Army Medical Corps.

The Army Medical Service, under the Royal Warrant of 1902, gives greatly increased advantages to officers of the Royal Army Medical Corps and offers an attractive career to young medical men

The provisions of the new Warrant insure —

1. Sufficient pay to enable the officer to support himself from the date of entering the service. (See Appendix, Schedule of Pay.)
2. Increased rates of pay to officers in charge of hospitals, or when selected for specialist appointments.
3. Opportunities of professional improvement by work in the Royal Army Medical College, by the study of disease in foreign countries and by original research.
4. Advancement on account of professional ability and merit and not only by order of seniority.

5. Permission to retire at the end of three years' service and to join the reserve of the corps, receiving a small annual honorarium. Permission may be given to officers of this reserve to rejoin the corps within a certain period.
6. The certainty of obtaining a gratuity of £1000 on retirement after nine years' service and of obtaining a *pension* of £1 a day on retirement after 20 years' service, with increased rates of pension after longer terms. Pensions at higher rates are paid to officers who retire on account of injuries received when on duty.

Pensions are granted to the widows and children of officers.

THE ENTRANCE EXAMINATION.

A competitive examination for commissions in the Royal Army Medical Corps takes place twice a year, in January and July. The number of vacancies is announced before each examination, and varies from 30 to 40 at each competition. After passing the ordinary physical examination for entrance into the army, and being accepted by the Advisory Board for Army Medical Services, the candidate comes before the Board of Examiners for the entrance examination.

The examination is conducted so as to test the candidates' practical knowledge and experience in general medicine and surgery. It is expected that candidates with a good knowledge of their profession will succeed in passing this test without the necessity for special reading in the earlier subjects of the medical curriculum. The written part of the examination consists of commentaries on cases set by the examiners and of reports on patients examined by the candidates. The *vivâ voce* part of the examination is of a clinical character, and includes the subjects of pathology and surgical anatomy only to the extent required in a general examination on practical medicine and surgery.

The Board of Examiners consists of eight physicians and surgeons appointed from the hospitals and medical schools of the United Kingdom.

On obtaining a place the candidate is gazetted as a lieutenant on probation and passes into the Royal Army Medical College in London where he receives a two months' course of instruction from the professors of the College in hygiene, bacteriology, military surgery, and military medical administration. He resides in the College and has the advantage of associating with other officers of the corps. At the end of this course he is examined in the subjects of hygiene and bacteriology and then proceeds to Aldershot where, at the training school of the Royal Army Medical Corps Depôt, he receives a further course of instruction for a period of three months on the military part of his future duties, such as routine medical duties in military hospitals and barracks, the drills and exercises of the corps, the practical work of field ambulances, military law, &c.

The sum of the marks gained at the entrance examination, the examination at the Royal Army Medical College and at the Aldershot examination, determines his seniority in the Army List. On qualifying at these examinations his commission as Lieutenant in the corps is now confirmed.

The number of marks obtainable in the three examinations is as follows :—

	Maximum marks.
1. The entrance examination by the Board of Examiners	800
2. Examination at the Royal Army Medical College	100
3. Examination at Aldershot	100

APPOINTMENTS IN CIVIL HOSPITALS.

If officers, at the time of entering the corps, hold, or have an immediate prospect of holding, resident appointments at any one of the large general hospitals recognised by the Advisory Board, they may be "seconded" for the space of one year while holding such posts. They have thus the privilege of retaining their places in the Army List and the time of tenure of the appointment is counted as service towards promotion and pension, but they do not receive Army pay.

FOREIGN SERVICE.

On leaving Aldershot the Lieutenant is appointed to a military hospital, and in about a year from the date of joining he will proceed to India or to one of the colonies and will probably be attached to a battalion, regiment, or other unit. This opportunity of proceeding abroad is usually regarded as one of the most pleasant episodes in the medical officer's career. He sees fresh countries and life under new conditions and has the opportunity of securing the confidence of his military charge and of gaining experience in practice. In addition to the experience afforded by the military hospitals under his immediate care there are in India, and in most of the colonies, civil hospitals where facilities for observation are never denied him and where he can study the diseases peculiar to the countries in which he may serve. In the same way as an officer of the Indian Medical Service he is permitted to engage in civil practice, which, in some stations, affords him a considerable increase of income. Such private practice is also permitted in colonial stations.

Until recently there was much well-grounded complaint of the inadequacy of the pay of the British medical officer in India, but with the augmentation sanctioned by recent regulations this ground of complaint no longer exists. The pay of the young officer goes further abroad than it does at home, and in India and elsewhere it is sufficient to enable him to live comfortably and to take part in the sports and amusements of his brother officers.

PROMOTION TO CAPTAIN.

At the end of three and a half years after joining the Royal Army Military College the officer, after passing a practical examination in the military duties of his rank, is promoted to be Captain. On completing his tour of foreign service of three or five years, according to the period of his station, he returns home and during his home service is appointed to the Royal Army Medical College for a course of six months' study. This is largely occupied in attendance on the clinical practice of various London hospitals, under selected clinical teachers in medicine, surgery, and in certain special subjects.

The teachers for the year 1903 are the following :—

Medicine	Dr. Sharkey. Dr. Hale White.
Surgery...	Mr. Pearce Gould. Mr. Stanley Boyd.
Dental Surgery	Mr. Badcock.
Dermatology	Dr. Colcott Fox.
Laryngology...	Mr. Steward.
Midwifery and Gynæcology	Dr. Dakin.
Ophthalmology	Mr. Treacher Collins.
Otology...	Mr Cheatle.
Pædiatrics	Dr. Garrod.
Psychological Medicine ...	Dr. Craig.
Specific Fevers	Dr. Foord Caiger.
Bacteriology.	Major Leishman, R.A.M C., Professor of Pathology, R.A M. College. Assistant Professor, Captain Harvey.
Skiagraphy	Surgeon-General Stevenson, C.B., Professor of Military Surgery, R A M. College.
Advanced Operative Surgery	Surgeon-General Stevenson, C B., Professor of Military Surgery, R A.M. College.
Hygiene	Major R.H Firth, R A.M C., Professor of Hygiene, R A.M. College. Assistant Professor, Captain Fowler, R A.M.C.
Pathology and Tropical Diseases	Major Leishman, R.A.M.C. Captain Harvey, R.A.M.C.

PROMOTION TO MAJOR.

At the end of this course of instruction the Captain is ready for his examination for promotion to the rank of Major. This examination, like the entrance examination, is of as practical a character as possible and includes general medicine and surgery, bacteriology and hygiene, and a special subject chosen by the candidate. This examination forms a very important event in his career in the army. An officer who shows special proficiency at this examination may gain acceleration of promotion to the extent of three months, six months, 12 months, or 18 months, and those who have shown aptitude in the special subjects chosen in their examination may be subsequently selected to hold specialist appointments at various army centres, receiving increased pay at the rate of about £45 per annum.

The officer, after from 10½ to 12 years' service from the date of entering the Royal Army Medical College, and on qualifying at this examination, is promoted to the rank of Major and various important and responsible appointments become open to him After completing a period of home service he proceeds on his second tour of service abroad and will be in all probability posted to a position of responsibility when his pay and allowances will amply meet all his needs

PROMOTION TO LIEUTENANT COLONEL

After the fifteenth year of service the officer proceeds to his last examination, which deals with those purely military subjects, with which he has gradually become familiar during his career This examination is also of a practical character and is intended to ascertain his administrative ability in view of further promotion

After passing this examination the officer becomes eligible for selection to the rank of Lieutenant Colonel Officers of this standing occupy prominent positions in the army, they command the depôt at Aldershot, they form the staff of the Director General, they have the charge of large hospitals and may become entitled to a very considerable increase in pay, amounting in some cases to as much as £180 a year After 20 years total service the officer may retire upon a pension of £1 per diem

PROMOTION TO THE HIGHER GRADE OF LIEUTENANT COLONEL AND COLONEL

Lieutenant Colonels are on selection advanced to a higher rate of pay and from this higher grade of Lieutenant Colonels are selected the Colonels of the corps Colonels are promoted on selection to the rank of Surgeon General and from the Surgeon Generals the Director General is appointed

BREVET PROMOTION FOR DISTINGUISHED SERVICE

Brevet promotion, which implies advancement in army rank as distinguished from regimental rank, as in other branches of the service, is now granted to medical officers for distinguished service in the field and for distinguished service other than in the field, such as distinction in original investigation and research

OFFICERS ELIGIBLE FOR SPECIAL HONOURABLE RECOGNITION

The officers of the Royal Army Medical Corps are eligible for military honours and rewards at the hand of the Sovereign and there are six honorary physicians and six honorary surgeons to the King appointed from among the officers of the Royal Army Medical Corps

It is worthy of notice that a large proportion of Victoria Crosses have been awarded to medical officers for valour

APPENDIX

EXPENSES, SPECIAL ADVANTAGES, PAY

The expenses of all officers have been considerably reduced as the result of recent legislation, by which the Government provides furniture in their quarters at a low rent, gives them a free field service outfit, &c

The medical officer has in common with all other officers of the army, the following advantages—viz , the occupation of Government quarters, or allowance in lieu thereof; military precedence, according to seniority, horse allowance when mounted, the employment of soldiers as servants; honorary membership of messes, &c

In large stations such as Aldershot, Netley, London, Rawal Pindi Lucknow, &c , there are messes of the Royal Army Medical Corps

PAY IN INDIA

	Rupees per mensem
Lieutenants	420
Captains	450
After seven years service	530
ten „ „	650
Majors	789
After 15 years service	826
Lieutenant Colonels	1100
Specially selected	1200
Charge pay from 60 rupees to 240 rupees per mensem according to size of hospital	
Specialist pay	60

Captains and Majors after qualifying in special subjects, if appointed specialists draw 2*s* 6*d* a day (£45 12*s* 6*d* per annum, 60 rupees per mensem in India) in addition to pay

Charge pay up to £180 per annum (240 rupees per mensem in India) according to number of beds is given to officers in charge of military hospitals

The following are examples of the emoluments which may be obtained by medical officers of various ranks —

Captain (say of ten years' total service)—

		£	s	d
Pay and allowances		474	19	11
Specialist pay		45	12	6
Charge pay		45	12	6
		566	4	11

Major (say of 10½ years' total service)—

		£	s	d
Pay and allowances		586	4	3
Specialist pay		45	12	6
Charge pay	from £91 5*s* to	182	10	0
		814	6	9

Lieutenant-Colonel (say of 18½ years' total service)—

		£	s	d
Pay and allowances		713	19	3
Charge pay	from £91 5*s* to	182	10	0
		896	9	3

If commanding depôt Royal Army Medical Corps extra pay of £92 per annum is given

PAY AND ALLOWANCES OF MEDICAL OFFICERS AT HOME.

Rank	Pay		Servant allowance		Lodging allowance		Fuel and light allowance		Forage and stabling allowances		Total per annum
	Per diem	Per annum	Per diem	Per annum	Per diem	Per annum	Per diem	Per annum	Per diem	Per annum	
	£ s d	£ s d	s d	£ s d	s d	£ s d	s d average	£ s d	s d	£ s d	£ s d
Lieutenant and Lieutenant on probation	0 14 0	255 10 0	1 0	18 5 0	2 3	41 1 3	0 8½	13 0 0	—	—	327 16 3
Captain	0 15 6	282 17 6	1 0	18 5 0	3 0	54 15 0	1 0¼	18 14 11	—	—	374 12 5
And after seven years full pay	0 17 0	310 5 0	1 0	18 5 0	3 0	54 15 0	1 0¼	18 14 11	—	—	401 19 11
And after ten years full pay	1 1 0	383 5 0	1 0	18 5 0	3 0	54 15 0	1 0¼	18 14 11	—	—	474 19 11
Major	1 3 6	428 9 6	1 0	18 5 0	4 0	73 0 0	1 5½	26 10 11	2 2	39 10 10	586 4 3
Major after three years service as such	1 6 0	474 10 0	1 0	18 5 0	4 0	73 0 0	1 5½	26 10 11	2 2	39 10 10	631 16 9
Lieutenant Colonel	1 10 0	547 10 0	1 0	18 5 0	4 6	82 2 6	1 5½	26 10 11	2 2	39 10 10	713 19 3
Lieutenant Colonel specially selected for increased pay after eight years service abroad	1 15 0	638 15 0	1 0	18 5 0	4 6	82 2 6	1 5½	26 10 11	2 2	39 10 10	805 4 3
Colonel	2 0 0	730 0 0	1 0	18 5 0	5 6	100 7 6	1 8½	31 6 3	4 1	74 10 5	954 11 2
Surgeon General	3 0 0	1095 0 0	2 0	36 10 0	11 0	200 15 0	2 3½	42 1 1	6 0	109 10 0	1483 16 1

Lieutenant-Colonel (selected for higher rate of pay, say at 23 years' service)—

	£	s.	d.
Pay and allowances	805	4	3
Charge pay	182	10	0
	987	14	3

Professors at the Royal Army Medical College receive pay and allowances of rank, plus £200 per annum.

Assistant professors at the Royal Army Medical College receive pay and allowances of rank, plus £80 per annum.

Officers can retire at the following periods and obtain the several gratuities and pensions enumerated :—

Gratuity—

	£
After 9 years' service	1000
,, 10 ,, ...	1250
,, 15 ,, ...	1800
,, 18 ,, ...	2500

Pension—

Major or Lieutenant-Colonel—

	Per diem.			Per annum.		
	£	s.	d.	£	s.	d.
After 20 years' service	1	0	0	365	0	0
,, 25 ,, ...	1	2	6	410	12	6
,, 30 ,, ...	1	5	0	455	15	0
Lieutenant-Colonel of the higher grade after 3 years' or after 30 years' total service...	1	10	0	547	0	0
Colonel after 3 years' service	1	15	0	638	5	0
Surgeon-General after 3 years' service...	2	0	0	730	0	0

Looking Back.

FROM

THE LANCET, *SATURDAY*, MAY 21, 1825.

FOREIGN DEPARTMENT.

ANALYSIS OF FOREIGN MEDICAL JOURNALS.

OMODEI'S ANNALI UNIV. DI MEDICINA.

Curious case of a horny excrescence growing from the head.

Paul Rodriquez of Messico, a tall man, and of athletic temperament, was in the habit of wearing a large cap of a peculiar figure, in order to conceal a tumour which projected from the side of his head, and which had at last reached an extraordinary size. Being at work in a warehouse, he was desired one day to assist in lifting a barrel of sugar into a cart; the barrel slipt back a little and struck Rodriquez with such violence on his concealed horns, that he fell upon the pavement insensible. In this state he was conveyed to the hospital of St. Andrew, which afforded the surgeons an opportunity of examining accurately these curious growths. A horny projection was found growing from the right and anterior part of the head, measuring *fourteen inches* in circumference; and about one inch from its base it divided into *three branches*, two large and one small. The central horn which was the largest, was curved and descended many inches below the ear, and then turned forward upon the cheek. The smallest excrescence of the three was situated just in front of the large one, and passed down on the cheek, just behind the external angle of the eye, as far as the middle of the superior maxillary bone, and was about three inches in length. Its extremity was separated about an inch from the curved termination of the middle horn, so that a considerable portion of the cheek, of a semicircular figure, was left between these two excrescences. The middle excrescence was very much the shape of a ram's horn, and had circular depressions and elevations marking the progress of its growth, just as the rings are seen on the horns of the ram, and it exhaled an odour exactly like the horn of that animal.

The violence with which the blow had been inflicted had broken off the lower extremity of the posterior horn, and had smashed its structure still higher up, so that its cavity was filled with blood. This singular excrescence did not adhere to the bones of the head, but appeared to grow from a cyst in the scalp, the sides of which were very thick, and lined with a smooth membrane.

Many analogous cases are on record, but we have never met with any account of a case in which the size of the horny excrescence was so large as in the present.

Public Health and Poor Law.

LOCAL GOVERNMENT BOARD.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On the Sanitary Circumstances of the Ashington Urban District and on Recent Enteric Fever therein, by Dr. L. W. DARRA MAIR.[1]—Ashington urban district comprises two Northumberland colliery villages, Hirst and Ashington, with populations respectively of about 7600 and 6300. Both villages are inhabited mainly by miners who work at one or other of three collieries belonging to the Ashington Colliery Company. Hirst is the newer place of the two and its residents are for the most part young adults with their families, whereas Ashington contains an older generation of miners. Dr. Darra Mair gives an account of the sanitary conditions of both villages, with particular reference to the opportunities for the spread of enteric fever. He draws attention to the way in which new dwellings are being put up without any regulation by building by-laws, to the uneven and unpaved surfaces at the backs of the houses, and to defective arrangements for emptying the ashpits and privies which lead to fouling of the soil. This is the more important as these receptacles are emptied more frequently and systematically than is the case in many villages of a like character, the colliery company undertaking to remove refuse once a fortnight. The company also supplies water to both villages. There is a service of mains for "slop water" which consists of a portion of the water pumped up in the ordinary operations of the collieries and is used for watering streets, for flushing sewers, and for fire-brigade purposes. Another series of mains supplies Ashington and Hirst with water for drinking and domestic use, which is pumped from certain deep coal mines which are no longer worked. The water from these mines is derived from the sandstone and collects in underground reservoirs formed by the worked-out coal seams. It is pumped to the surface, passed through a filter, and stored in disused boilers which serve as storage tanks. The urban district had for some years past shown a high attack-rate and also a high death-rate from enteric fever. In 1901 187 cases of this disease were notified, 135 occurring in Hirst and 52 in Ashington. 20 of the cases at Hirst and eight of the cases at Ashington were fatal. This outbreak began at the end of August, 1901, and reached its height in October and November. Cases continued to occur in the early months of 1902, the prevalence of the disease ceasing in May. Dr. Darra Mair's inquiries were made in February, 1902, and also later in the year, when he was assisted by Mr. Law of the engineering department of the Local Goverment Board in an investigation of the conditions of the water service. This additional inquiry had become necessary in consideration of the various facts ascertained regarding the outbreak in the autumn of 1901. The dwellings in which enteric fever occurred during this period were scattered throughout both villages, with the exception of the one portion of Hirst which was not supplied with drinking water from the colliery company's mains. The disease occurred with greatest intensity in portions of two parallel streets in Hirst, in which 27 out of a total of 52 houses were affected. These two portions of streets were served by a common water main situated at the termination of the colliery company's water system and forming a "dead end." These and other considerations set out in detail in the report led Dr. Darra Mair to conclude that somehow or other the whole drinking water-supply had become specifically contaminated and had been accompanied by special infectivity of water drawn from taps near the terminals of the mains. This seemed to be the more probable as he was able to exclude any idea that milk or other articles of food had been concerned in producing the outbreak in consequence of careful local inquiries which had been made by Dr. J. M. Hembrough, medical officer of health of Northumberland. When, however, search was made for possible sources of contamination of the underground reservoirs of the colliery company the results proved to be almost entirely negative. No opportunity of leakage from portions of the collieries where work is going on could be detected. Obviously, however, a number of intricate geological questions would need to be dealt with before the absence of such opportunities could be asserted and it is noteworthy that analysis of three samples of the colliery company's drinking water-supply, taken from taps in Hirst and Ashington on the same day, varied greatly in respect of total solids and free and albuminoid ammonia. This points either to unrecognised opportunities of con- [illegible] possibilities of [illegible] Dr. Darra Mair [illegible] ne which must remain under suspicion, even after the thorough overhaul of the system of distributing pipes which he advocates. No alternative source of supply is readily available for the Ashington district alone, but possibly a solution of the difficulty may be found in combination with neighbouring districts for water-supply purposes on the lines of certain schemes now under the consideration of the Northumberland County Council.

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[1] London: Eyre and Spottiswoode, East Harding-street; Edinburgh: Oliver and Boyd; Dublin: E. Ponsonby. Price 4d.

On the General Sanitary Circumstances of the Parish of Loose in the Rural District of Maidstone, with especial reference to Drainage and Excrement Disposal, by Dr. R. D. SWEETING.—Dr. Sweeting reports the results of an inquiry ordered by the Local Government Board into an application by the Maidstone rural district council for the issue of an order declaring the cost of scavenging cesspools to be "special expenses," in the sense of the Public Health Acts, upon the whole or upon part of the parish of Loose on the outskirts of Maidstone. The matter had become pressing owing to the need of some system to supersede the present objectionable arrangements by which slop-water, excrement, and various kinds of refuse are habitually discharged into the tributary of the Medway which passes through Loose. The district council considered the provision of sewers to be impracticable in view of the local opposition made to the proposal and hence it advocated the general provision of cesspools in that portion of the parish which at present sends its liquid refuse into the stream, together with a system of periodical cleansing of these cesspools by the council at the cost of the parishioners concerned. Dr. Sweeting describes the condition of affairs in detail and makes a series of suggestions for remedying the present objectionable conditions without having recourse to a cesspool system. He recommends also that "special expenses" in respect of scavenging existing cesspools, as well as of providing and maintaining sewers, should be chargeable to the parish as a whole.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Exeter Urban District.—The number of cases of enteric fever notified in Exeter during 1902 was, Dr. John Woodman reports, the lowest on record and he is inclined to attribute the diminution to the fact that within recent years the sewage of Exmouth has been directed from the cockle beds near to which it formerly discharged. It would have been useful had further details as regards the age distribution of the cases in the several years been given since, so far as we remember, the outbreak which occurred in Exeter as the result of the consumption of cockles at Exmouth was confined mainly to children at school ages. As a matter of fact the total cases (33) are only five lower than those (38) notified in 1895. But be this as it may, no one will question the propriety of Dr. Woodman's advice that the discharge of sewage in the immediate vicinity of any shell-fish beds should be prohibited. Dr. Woodman accentuates the importance of protecting the breeding grounds of shell-fish, but, as a matter of fact, the breeding grounds are second in importance to the "fattening" or market grounds—i.e., those places from which shell-fish are taken for immediate consumption. Pulmonary tuberculosis is notifiable in a voluntary sense in Exeter but Dr. Woodman regards this form of notification as of little value. He thinks that disinfection should be compulsory in all premises in which deaths from pulmonary tuberculosis have occurred. The public analyst of the city reports that in the public water-supply the number of micro-organisms per cubic centimetre in three samples examined was 35, 93, and 120, but it would have been interesting had the nature of such organisms been stated and had the filtrate from each of the filter beds been dealt with separately.

Knutsford, Middlewich, Winsford, and Biddulph Urban Districts.—Mr. T. W. H. Garstang reports that the offer of the several district councils referred to above to pay 2*s.* 6*d.* for each case of pulmonary tuberculosis notified has not met with much support from the medical practitioners concerned as only 10 such cases were notified during 1902, the deaths during the same period having been 33.

Plympton St. Mary Rural District.—This district council has decided to contribute to the part maintenance of one bed at the Didworthy sanatorium for consumption. In connexion with this subject of tuberculosis Mr. S. Noy Scott makes some very pertinent remarks. He thinks it well "to issue a word of warning with regard to the great expectations which are at present being raised as to sanatoria. It must not be forgotten that sanatoria of phthisis are to be mainly regarded as hospitals for dealing with the results of tuberculosis and for curing or arresting disease and should therefore hardly be classed amongst such [illegible] as subsoil drainage, w[illegible] and air, prevention o[illegible] unhealthy occupations less dangerous to the workers, and, therefore, although there can be no question as to the usefulness of sanatoria in the treatment of phthisis, yet it may be safely said that a given sum of money used in the promotion of the above list of 'primary preventive measures' would do more towards the permanent reduction of the death-rate from phthisis than many times the same sum expended in the building and support of sanatoria."

Wimbledon Urban District.—Measles has been notifiable in this district for the last five years and as a result of the experienced gained Mr. E. Pocklington, the medical officer of health, does not advise the continuance of the measure. The main arguments used seem to be that this measure has not prevented epidemics nor has it reduced the mortality from the disease. Mr. Pocklington is unable, he states, to stay the spread of the disease in schools inasmuch as the schools have not been closed when he regarded it as necessary. This statement appears to need some amplification. It is also urged that "were it possible by notification, &c., to check the spread for a few years we should have on our hands a large number of liable children to whom an epidemic would spread very rapidly when it eventually did occur, as surely would be the case." This is a somewhat fatalistic view to take of the situation and it overlooks the fact that there are obvious advantages in postponing an attack of measles. Although we fully admit that the subject of the notification of measles is a very difficult one we cannot regard the arguments here adduced for a discontinuance of notification as very convincing. Mr. Pocklington states that danger lies not in measles when the disease is properly looked after but in those cases which are neglected on account of their triviality. But surely one result of notification should be the education of the poorer classes in the proper care of measles

Brighton Urban District.—In the middle of 1902 Brighton had a population of 124,539 and in his current annual report Dr. Arthur Newsholme furnishes the 1901 census figures for [illegible] neighbourhood. The birth-rate in Brighton [illegible] Dr. Newsholme refers [illegible] the general reduction in the birth-rate in the country as a whole. He ascribes this reduction almost solely to the prevention of conception by artificial means. He thinks there is not "the slightest reason for believing that the potential fecundity of civilised man is declining." There are, however, many who would regard this statement as hardly supported by what is known as to the behaviour of animals under domestication. In connexion with small-pox Dr. Newsholme supplies some facts which tend to show the advantage of the notification of chicken-pox and this disease is consequently to be notifiable for another year in Brighton. With regard to both scarlet fever and diphtheria some interesting illustrations are given in the report before us of the importance of the early recognition of cases of these diseases and of the evil consequences which ensue from overlooking cases in their initial stages. Certainly the more we learn of epidemic diseases the more importance do we attach to the influence of unrecognised cases. Prophylactic doses of antitoxin were given in 27 instances during 1902, the medical practitioners receiving a fee of 2*s.* 6*d.* for each case. None of the persons thus treated contracted the disease. As regards the value of this treatment Dr. Newsholme raises questions as to whether the employment of antitoxin in this prophylactic sense, although it may in some cases prevent the disease from developing, may not prevent the person so treated from becoming a source of infection. In the matter of the bacteriological examination for suspected diphtheria we are glad to see that in Brighton "three consecutive failures to find the diphtheria bacillus are required before any importance can be attached to negative results." There were 42 cases of enteric fever in Brighton during 1902 and Dr. Newsholme states definitely that of this number "11 were caused by oysters, six and three secondary to these were caused by mussels, and one was caused by whelks, with one case secondary (by personal infection)." With regard to the evidence as to the connexion between shell-fish and diseases the statement is made that "it is purely circumstantial and can only be regarded as conclusive by those who, like myself, have felt the steadily increasing weight of conviction produced by the steady flow of cases for which no cause can, after diligent search, be detected other than the previous consumption of shell-fish." The words "of shell-fish known to have been derived from sources liable to specific pollution" are perhaps necessary to complete this sentence, as if the oysters were derived from mid-ocean and had no opportunities of becoming polluted the mere fact of the consumption of oysters would be of little greater value than the fact of the consumption of any other article of food theoretically capable of conveying enteric fever. But apparently Dr. Newsholme could, at least in some of the cases, have quite well added the words which we suggest, although we fear that the statements of some oyster merchants as regards the source of their shell-fish are not always to be relied upon. But in any circumstances there can be no question whatever that the sale of shell-fish from polluted sources should be prohibited, and we are glad to see that Brighton has recently drafted a by-law which aims at "prohibiting the sale or exposure for sale in Brighton fish market of oysters or other shell-fish known to have come from a sewage-contaminated source." The words used in the by-law of "polluted or contaminated with sewage" might perhaps be held by some bacteriologists to apply to almost every estuary in England as well as to much of the littoral, but Dr. Newsholme may be trusted to take a reasonable view of the situation and to content himself with excluding shell-fish concerning which there can be no reasonable doubts. We much hope that Brighton will obtain, either in the shape of a modified by-law or otherwise, the protection which it seeks against the consumption of specifically polluted shell-fish. The voluntary notification of pulmonary tuberculosis has now been in operation in Brighton since 1899 and there appears to be a steady increase in the number of cases notified year by year. Certain cases seem to have been notified several times. In case of death or in the event of change of address disinfection and cleansing of the invaded houses are undertaken by the town council. As the result of four years' experience of the notification of pulmonary tuberculosis in Brighton Dr. Newsholme is of opinion that the measure is necessary in the interests of the public health. He is "more convinced than ever that the effective prevention of the spread of infection can only be secured when the family practitioner and the medical officer of health coöperate." Arrangements have now been made for the admission of cases of pulmonary tuberculosis into the isolation pavilion of the borough sanatorium, one of the main objects of this step being to educate the patients in precautionary measures.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8911 births and 4441 deaths were registered during the week ending May 16th. The annual rate of mortality in these towns, which had been 17·4, 17·5, and 15 9 per 1000 in the three preceding weeks, further declined to 15·4 per 1000 last week. In London the death-rate was 14·4 per 1000, while it averaged 15·8 in the 75 other large towns. The lowest death-rates in these towns were 3·3 in Hornsey, 7·1 in East Ham and in Hastings, 7·9 in Warrington, 8·6 in Willesden, 9·1 in Ipswich and in Handsworth, 9·8 in Kings Norton, and 10 6 in Devonport; while the highest rates were 21·2 in West Bromwich, 21·4 in Oldham, 21·8 in Merthyr Tydfil, 22·2 in Coventry, 22·9 in Stockport, 23·1 in Hanley, 24·0 in Rochdale, and 24·1 in Middlesbrough. The 4441 deaths in these towns last week included 428 which were referred to the principal infectious diseases, against 504, 518, and 457 in the three preceding weeks; of these 428 deaths 125 were referred to measles, 110 to whooping-cough, 57 to diarrhœa, 52 to diphtheria, 41 to scarlet fever, 26 to "fever" (principally enteric), and 17 to small-pox. In Hornsey, Brighton, Norwich, Stockport, Huddersfield, Halifax, York, South Shields, and in eight other smaller towns, no death from any of the principal infectious diseases was registered last week, while they caused the highest death-rates in Tottenham, Wolverhampton, Nottingham, Bootle, Wigan, Oldham, Merthyr Tydfil, and Swansea. The greatest proportional mortality from measles occurred in Croydon, Tottenham, Coventry, Nottingham, Wigan, Bolton, Manchester, and Swansea; from diphtheria in Hanley, Oldham, and Merthyr Tydfil; from whooping-cough in Salford, Oldham, Barrow-in-Furness, Sheffield, and Merthyr Tydfil; from "fever" in Wolverhampton; and from diarrhœa in Wolverhampton and West Bromwich. Six fatal cases of small-pox were registered in Liverpool, two in Leeds, and one each in Aston Manor, Bootle, Manchester, Oldham, Rochdale, Burnley, Bradford, Hull, and Gateshead, but not one in any other of the 76 large towns. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had risen from seven to 60 on the eight preceding Saturdays, were again 60 on Saturday, May 16th; seven new cases were admitted during the week, against nine, 12, and 17 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 1756, against 1700, 1717, and 1730 at the end of the three preceding weeks; 236 new cases were admitted during the week, against 243, 235, and 229 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 280, 284, and 260 in the three preceding weeks, declined again last week to 226 and were five below the number in the corresponding period of last year. The causes of 67, or 1·5 per cent., of the deaths in the 76 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Plymouth, Bristol, Bolton, Salford, Oldham, Newcastle-on-Tyne, and in 36 other smaller towns; the largest proportions of uncertified deaths were registered in Leyton, Liverpool, Bootle, St. Helens, Preston, Sheffield, Rotherham, and South Shields.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 18·5, 19·2, and 17·9 per 1000 in the three preceding weeks, rose again to 18 0 per 1000 during the week ending May 16th, and was 2·6 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 7·7 in Perth and 12·9 in Aberdeen to 19 3 in Glasgow and 22·5 in Greenock The 590 deaths in these towns included 25 which were referred to whooping-cough, 16 to measles, 12 to diarrhœa, six to diphtheria, five to "fever," and four to scarlet fever, but not one to small-pox. In all, 68 deaths resulted from these principal infectious diseases last week, against 57 in each of the two preceding weeks. These 68 deaths were equal to an annual rate of 2·1 per 1000, which was 0·6 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 30, 32, and 26 in the three preceding weeks, further declined last week to 25, of which 12 occurred in Glasgow, seven in Edinburgh, and four in Greenock. The deaths from measles, which had been four, seven, and eight in the three preceding weeks, further rose to 16 last week, and included nine in Glasgow, and five in Edinburgh. The fatal cases of diarrhœa, which had been 11 in each of the two preceding weeks, increased last week to 12, of which seven were registered in Glasgow, two in Dundee, and two in Aberdeen. The deaths from diphtheria, which had been two, one, and five in the three preceding weeks, further rose to six last week and included four in Glasgow, where also two of the five deaths from "fever" were recorded. The fatal cases of scarlet fever, which had been four in each of the two preceding weeks, were again four last week, and included two in Edinburgh and two in Paisley. The deaths referred to diseases of the respiratory organs in these towns, which had been 129, 125 and 104 in the three preceding weeks, further declined last week to 101, and were 13 below the number in the corresponding period of last year. The causes of 24, or more than 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·8, 25·7, and 25·3 per 1000 in the three preceding weeks, further declined to 22·3 per 1000 during the week ending May 16th. During the past four weeks the death-rate has averaged 24·5 per 1000, the rates during the same period being 16·1 in London and 17·2 in Edinburgh. The 162 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 22 from the number in the preceding week and included 15 which were referred to the principal infectious diseases, against eight, nine, and 15 in the three preceding weeks; of these, five resulted from measles, four from small-pox, three from whooping-cough, and one each from scarlet fever, from "fever," and from diarrhœa, but not one from diphtheria. These 15 deaths were equal to an annual rate of 2·1 per 1000, the death-rates last week from the same diseases being 1·5 in London and 2·5 in Edinburgh. The deaths from measles, which had been one, one, and 0 in the three preceding weeks, increased last week to five. The fatal cases of small-pox, which had been one, three, and four in the three preceding weeks, were again four last week. The deaths from whooping-cough, which had been one, one, and four in the three preceding weeks, declined again last week to three. The 162 deaths in Dublin last week included 34 of children under one year of age and 48 of persons aged 60 years and upwards; the deaths among both infants and elderly persons slightly exceeded the respective numbers recorded in the preceding week. Two inquest cases were registered, and 71, or nearly 44 per cent., of the deaths occurred in public institutions. The causes of five, or more than 3 per cent., of the deaths in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Surgeons: F. F. Lobb to Royal Marines Division, Plymouth, and E. F. Mortimer to Plymouth Hospital.

Civil Practitioner: T. Foley to be Surgeon and Agent at Ardmore, Ballymacart, and Whiting Bay.

1ST LIFE GUARDS.

Surgeon-Major B. W. C. Deeble to be Surgeon-Lieutenant-Colonel. Dated Feb. 3rd, 1903.

ROYAL ARMY MEDICAL CORPS.

Major J. Paterson, from half-pay, to be Major, vice V. E. Hunter, deceased, with precedence next below A. P. Blenkinson. Dated April 26th, 1903. Lieutenant G. W. G. Hughes, from the seconded list, to be Lieutenant. Dated May 2nd, 1903. Lieutenant-Colonel William Birkmyre Miller, retires on retired pay. Dated May 16th, 1903.

The undermentioned Lieutenants to be Captains (dated April 25th, 1903):—T. Biggam, W. L. Baker, F. W. Cotton, F. M. Parry, B. R. Dinnis, W. J. P. Adye-Curran, J. Powell, R. L. Argles, J. G. Foster, E. G. Ford, F. S. Walker, L. M. Purser, W. Bennett, P. G. Stock, H. B. Fawcus, T. E. Fielding, E. P. Sewell, C. H. Straton, B. S Bartlett, R. T. Brown, G. Carroll, D. O. Hyde, A. E. Hamerton, G. J. Houghton, J. G. Churton, A. D. Waring, T. H. Stevenson, J. M. Cuthbert, F. McLennan, A. F. Weston, J. Dorgan, O. H. Furnivall, J. H. Robinson, and Fitz G. FitzGerald.

THE ROYAL MILITARY TOURNAMENT.

Important as are the many aspects from which the Royal Military Tournament at the Agricultural Hall may be viewed there is one which should be placed before all others—namely, the point of view of charity. The entire profits derived from the performances—an aggregate of £47,000 for the past seven years—are devoted by the commander-in-chief to naval and military charities, and for this reason alone the tournament should receive the widest support. But the tournament has an important bearing on the education of the general public in military matters and forms a means of healthy amusement for the people, to say nothing of its use as an aid to recruiting. For the present we must confine ourselves to a brief reference to the displays and competitions, reserving for another occasion, if space permits, a more critical review of the tournament. From a spectacular point of view the pageant, which is a miniature representation of the Delhi durbar, is enthusiastically appreciated, as is also the military tattoo by massed bands; the latter item, however, is only to be seen and heard three times in the fortnight during which the tournament is in process. It is worth a visit to the Agricultural Hall to see either of these items alone, but there are other "turns"—if we may borrow a word from music-hall parlance—which are equally attractive, and amongst them we may mention the musical double ride by the 2nd Life Guards, the finest performance of this description which has ever been seen at the tournament. Next week the Life Guards will give place to the 5th Royal Irish Lancers. The displays by the seamen of the *Excellent* and by the Royal Marines are referred to in another part of our present issue (p. 1457). Then there are the competition of the Army Service Corps, a wonderful exhibition of smartness; the musical drive by the Royal Artillery; bareback riding, furnished by a team from the Cavalry Depôt at Canterbury; the display by the A Battery of the Royal Field Artillery; wrestling on horseback and the usual competitions, which include tent-pegging, lemon-cutting, heads and posts, and the combats between men using the various arms of the service. Altogether the twenty-fourth Royal Military Tournament is the best which has ever been held at Islington and Major-General Oliphant and his committee deserve the best thanks of the public for providing such an excellent, instructive, and entertaining programme. The medical and sanitary arrangements, though perhaps not all that could be desired, are undoubtedly the best that can be obtained in a building which does not belong to the military authorities and which is certainly not adapted to military performances. Surgeon-Lieutenant-Colonel W. R. Crooke-Lawless of the Coldstream Guards is the principal medical officer and he is assisted by Captain F. A. Symons, R.A.M.C. Lieutenant-Colonel A. R. Rowe is in charge of the veterinary arrangements. The tournament will close on May 30th.

THE WOUNDED IN NAVAL WARFARE.

The disposal of the wounded in naval warfare is confessedly a very difficult problem. In a lecture delivered recently at the Royal United Service Institution and published in our present issue (p. 1431) Dr. Philip N. Randall, late R.N., advocated the plan which has seemed to be the most plausible to those who have given the matter consideration, namely, the provision of vessels flying the Geneva Cross and specially fitted out for the purpose. These should be attached to a fleet and utilised for the reception and treatment of the wounded during or immediately after an engagement. There seemed to be a consensus of opinion among those who took part in the discussion that it would prove unsafe and impracticable to attempt any removal of the wounded during an action and that beyond having first aid rendered to them the wounded must remain where they were until the action was over and their safe removal could be assured.

THE ARMY CORPS.

Whether an army corps scheme borrowed from the continent or an organisation by divisions be best suited to this country from a strategical point of view is a matter into which we need not enter. It must be admitted, however, that the War Office return just issued giving the actual numbers and peace establishment of the units in the First, *Second*, *Third*, and *Fourth Army Corps* goes a long way in showing that such corps are not a mere paper organisation, and that they are not, as has been alleged, only phantom corps, but that they have a fairly real existence and that Mr. Brodrick's contentions regarding his new scheme have been so far justified.

The King has granted to Captain Henry Nason Dunn, R.A.M.C., His Majesty's Royal licence and authority that he may accept and wear the Insignia of the Fourth Class of the Imperial Ottoman Order of the Osmanieh, conferred upon him by His Highness the K[illegible] of valuable services rendered to [illegible]

The report of the committe[illegible] existing conditions under which canteens and regimental institutes are conducted, together with a minority report and appendices, has been issued as a Parliamentary Blue-book.

and found that the child, a six and a half months' one, had been born two hours, but that the placenta was still undelivered. This latter was expelled without any difficulty, but on finding the uterus still flaccid I asked for the ergotine. To my astonishment I discovered that a neighbour in attendance had mistaken the husband's instructions "to give two of these at once" and had instead given the tube itself and wondered where another one was. The patient had taken it in good faith, thinking it a new form of drug and wondering only why it was so long. Of course there was nothing to do but to wait. Castor oil was given freely and on the afternoon of May 5th—four days later—the tube arrived, without any pain and with the cork still *in situ*. I may add that the tube was half full of ergotine, so that the many risks of a foreign body in the intestine were much augmented by the fact of that body containing a poison. The patient is very well now and able to laugh over her adventure.—I am, Sirs, yours faithfully,

W. HERBERT GREGORY, M.D. Edin.

Beverley, May 16th, 1903.

ASPECTS OF LIFE ASSURANCE.

To the Editors of THE LANCET.

SIRS,—With reference to a leading article which appeared in THE LANCET of May 9th, p. 1313, calling attention to the provision which may be made for the future by those who insure their lives, I observe that considerable stress is laid upon the certainty attending this form of investment. Indeed, the fact that a sure provision is made for the survivors of the assured, owing to the financial soundness of life assurance companies, is one always dwelt upon by those who recommend them. Is not, however, this certainty of provision considerably lessened by the fact that many or most life assurance societies issue policies which are in express terms made void by the suicide of the assured? It is, of course, contemplated by them that a man might insure his life at a high figure, pay a premium or two, and then kill himself in order to pay his debts or to provide for his wife and family. I am, I believe, right in saying that suicide is thus excepted in the conditions usually made. If I am wrong you will, no doubt, correct me. My point is that suicide is very frequently the result of what is substantially disease and as much a cause or form of death to which all are liable as typhoid fever or a railway accident. Speaking from my own limited experience I can recall, among others, three persons in particular with whom I was personally acquainted who committed suicide. Two were lawyers with moderate professional incomes and private means; the third was engaged in commerce and his assets at his death amounted to not far from £100,000. Of the two former, one became depressed, I do not know why, and before anyone recognised the fact that his brain was affected took his own life; and the other, as everyone knew, after a severe attack of influenza found himself less able to work than before, got worried, and shot himself. Each of these was precisely the sort of man who might well have insured his life. There was nothing to distinguish him in health from his fellow men; each had a family and was earning enough to have been able to have done so. At all events neither was in embarrassed financial circumstances, any more than the third, whose brain, I believe, was affected by a succession of hunting accidents. I think, however, that I am right in saying that the majority of policies which would have held good had these men died from pneumonia or in the hunting-field would have been rendered void by suicide for which influenza or a hunting accident was directly responsible. Can life assurance, if it is ineffective in case of a death which (as I contend) is as much beyond the power of the assured to avoid as any resulting directly from disease, be regarded as a certain and safe provision for a professional man to make?

I am, Sirs, yours faithfully,

May 18th, 1903. N. M. R.

PRESENTATION TO A MEDICAL PRACTITIONER.—At Crediton (Devon) on May 9th Mr. Leslie Powne, M.R.C.S. Eng., L.S.A., was presented with a pair of gold cuff-links by the members of the ladies' class of the St. John Ambulance Association, in appreciation of his services as honorary lecturer.

THE SECOND INTERNATIONAL CONGRESS OF THE MEDICAL PRESS.

(FROM OUR SPECIAL CORRESPONDENT.)

THE OPENING CEREMONY.

Madrid, May 6th.

IT seems a long way now to hark back to April 20th when the International Congress of the Medical Press held its inaugural sitting in the great hall of the Central University buildings of Madrid. But this congress, instead of terminating its labours on April 22nd, continued its work up to the very last minute on April 23rd, giving its members only just time to rush from the closing sitting of the one congress to assist at the opening ceremony of the other. This latter Congress, the Fourteenth International Congress of Medicine, affording greater general interest than the more specialised questions that concern medical journalism as a profession, it seemed to be better to describe the more important congress first in spite of the fact that it was held last. The inauguration of the Medical Press Congress was a ceremony well worthy of the occasion. Señor Allende Salazar, Minister of Public Instruction, presided, sitting by the side of Dr. Cortezo, the President of the International Congress of the Medical Press, and Dr. Calleja, President of the International Medical Congress. At the presidential table France was represented by Professor Cornil of *Paris*, president of the International Association of the Medical Press, and England by Dr. Frank Pope of Leicester, delegate of the Association of the British Medical Press. The rectors of the Universities of Madrid and of Barcelona were also in the place of honour at the presidential table. Dr. Larra y Cerezo, as general secretary of the Congress, was first called upon to make a statement and to explain the position of affairs. As a medical journalist Dr. Larra cannot be accused of being wanting in enterprise. He had barely terminated his studies, devoting himself especially to questions of hygiene and therapeutics, when he founded, in 1882, the *Therapeutical Review*, and not content with this he even published a daily medical paper called the *Diario Medico*. This was the fruit of youthful enterprise. Dr. Larra was only 23 years old at the time, nevertheless his daily paper lived ten months, and his review still exists though it was merged into *La Medicina Militaire Española* in 1895. Dr.

Dr. Carlos M. Cortezo, President of the International Congress of the Medical Press.

Larra, whose portrait was recently published in these columns,[1] has done much to promote the love of physical exercise in the schools of Spain and is a corresponding member of the British Sanitary Institute. He is likewise the publisher of a Spanish technical medical dictionary, to which a small supplement is issued every year containing the new terms that have arisen during the year.

Dr. LARRA explained that the Congress was attended by representatives of the medical press of the Argentine Republic, Belgium, Cuba, France, Germany, Great Britain, Greece, Holland, Italy, Norway, the United States, and Spain. It was for him a great honour to have assisted in bringing together the thinkers and writers of so many nations.

Dr. CORTEZO, as president of the Spanish Committee of Organisation and of the Congress, now rose to welcome the members and delegates, wishing them to consider themselves at home in Spain. The science which they advocated and taught did not recognise the fictitious differences and antagonisms created between nations. They rose above the frontier lines and in this Congress were all merely members of the same family. To be better understood, Dr. Cortezo spoke in French, German, and Italian as well as in Spanish. He pointed to the libraries that contained works from authors of all these countries. He alluded to the noble initiatives so often taken by France, even at the cost of the lives of her children, to the German profundity of thought and investigation, to the British love of freedom, and to the similar blue sky, history, and race that united Italians and Spaniards.

The MINISTER of PUBLIC INSTRUCTION next rose to speak, and in the name of the King and the Government welcomed the members of the Congress He alluded to the help given by the medical press in connexion with those great discoveries which had revolutionised the practice of surgery. Further the medical press helped to weld together men of science from all parts of the world into one great brotherhood. In the name of the King and of the Government, in the name of the entire Spanish people, he saluted all the delegates, especially those who from distant countries had honoured Spain by their presence, and declared that they were heartily welcome.

Dr. Rafael Ulecia, Delegate of Spain to the Monaco Medical Press Conference.

Professor CORNIL then spoke on behalf of the French medical journalists and expressed his gratitude to the King and the Government for their hospitality and for having rendered the meeting of the Congress possible. He recalled the origin of the International Association of the Medical Press, how it had been talked about at Rome, neglected at Moscow, and, how, with the active aid of the German and French medical press associations, a congress had actually been held in Paris in 1900. The medical press, he maintained, governed the medical profession just as other forms of human activity were governed by their respective journals Virchow, Pasteur, Brown-Séquard, all had their "annals" or "archives." But they had now the medical journal, which like other journals, gave the latest professional news and treated all allied interests. The object of these journals was to preserve men from all that was unwholesome, to relieve and to cure mankind in the accomplishment of its mission. For this end medical journals had proclaimed that humanity had a right to pure air and water and that these were as important as daily bread. So the medical press while confined to its special task was yet helping all other sections of the community. Professor Cornil then alluded to the conference held last year at Monaco where the international committee was treated to th [illegible] lt of the work there [illegible] had been drawn up a [illegible] o the Madrid Congress [illegible] the memory of the late Dr. Laborde, who had so largely helped in drawing up a constitution for the Association, Professor Cornil concluded by pointing out that such congresses helped to refine and to elevate our thoughts.

Dr. POSNER (Berlin) spoke on behalf of the German medical press and that of the German-speaking part of Austria. He alluded to the great work of Virchow as a publicist and said that they would endeavour to follow in his footsteps and he hoped that the progress of science thus promoted would help to bring about international confraternity.

Dr. DEJACE spoke [illegible] —that little country [illegible]

Dr. SANTOS FERN[illegible] striven to keep a medical press alive in that island, in spite of all the troubles and struggles which had afflicted his people. He expressed his gratitude to Spain for the help which it was giving in this great work of scientific progress.

Dr. CRYER (Philadelphia) said a few words on behalf of the medical press of the United States which had taken special pains to obtain full information concerning the congresses to meet in Madrid.

Dr. BLONDEL, (as [illegible] Association of the [illegible] e by the late Dr. Lab [illegible] o witness the crownin[illegible] self so much trouble to raise [illegible]

It was now the turn of England and Mr. ADOLPHE SMITH rose to speak on behalf of the Association of the British Medical Press. He spoke in French and after expressing his gratitude for the royal patronage and the cordiality of the reception given, added that he had been three times in Spain. On the first occasion the country was devastated by a most terrible and widespread cholera epidemic, complicated by numerous earthquakes. On the second occasion war had just broken out with the United States. On the third and present occasion the country was in the throes and distracting cares of a general election. Nevertheless, and in spite of these trying and disturbing circumstances, the people and the Governments of Spain had invariably and with unruffled courtesy assisted him in the performance of his duty as a journalist and as an investigator on behalf of the scientific press.

Dr. ASCOLI having said a few words on behalf of Italy, the MINISTER of PUBLIC INSTRUCTION rose to reply. After expressing his satisfaction at what had been said by various delegates and thanking Professor Cornil for his cordial words, the Minister turned and addressing Mr. Adolphe Smith by name said he could assure him that notwithstanding all the vicissitudes through which Spain had passed and might still have to face the Spanish Government was always alive to the importance, indeed, was perfectly aware, of the great part played by the medical press in the cause of humanity. It was the means of diffusing knowledge to the remotest corners of the world. Medical men were, by the very nature of their duties, often called upon to live in distant parts, in rural districts and other places where it would be impossible for them to follow, and to keep abreast with modern progress but for the fact that it was brought to their doors by the medical press. Therefore he could promise the British representatives that the Government would afford the press every facility to accomplish its high mission, particularly as it was so worthily represented. He was grateful, from the very depths of his heart, to those gentlemen who had come from such great distances to coöperate in the Congress and to awaken the spirit of progress. It was for the medical press to record and to make known all the progress that science achieved. In the name of His Majesty Don Alfonso XIII. he declared that the Second International Congress of the Medical Press was now open.

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[1] THE LANCET, May 2nd, p. 1270.

The military band then played the Royal March and this concluded the opening ceremony.

THE FIRST DAY.

Madrid, May 7th.

On the morning of April 21st the Congress held its first business meeting, having been duly inaugurated on the previous afternoon. Those members of the international committee who were present met in a private room to arrange the order of procedure. It was generally felt that those who had reports to read and speeches to make on general topics should be heard first and that then the more serious work of coming to a definite agreement and accepting the rules drawn up at Monaco would be more easily accomplished. It was no slight matter to select a judicious course, for there were present a large number of Spanish journalists who, it was quite evident, knew little of the real purpose for which we had met but were nevertheless anxious to deliver speeches or to read papers on what they imagined was, or should be, our motive. To let them disregard the rules of the association so carefully drawn up at Monaco and about which so many present knew little or nothing would be a dangerous proceeding. Therefore the field was thrown open to the readers of papers and the first to speak was Dr. ESPINA DE CAPO. He had a great deal to say about tuberculosis and what the medical press could do to prevent its spread, thus confusing the question of organising the medical press with the question of what medical journals could do to spread knowledge on certain subjects. Dr. SANTOS FERNANDEZ of Cuba described the anti-tuberculosis league of Havana of which he was president. Then came Dr. TOLOSA-LATOUR, member of the Madrid Royal Academy of Medicine, who very sensibly urged that it was the mission of the press in general, of the daily popular political papers, to spread some knowledge of those sanitary measures which were the best preventive of tuberculosis. Dr. AVILEZ having said something about the control of mineral waters in Spain and Professor MARTINEZ VARGUS on the distribution of tracts on sanitation, Dr. TOLOSA-LATOUR rose again to read a lengthy speech which he had had printed in French and in pamphlet form. He appropriately reminded the Congress that not only the medical press but the general press of France had been founded by a medical man—that was, by Théophraste Renaudot—who was a philanthropist, a doctor, a man of letters and a genial journalist, and whose statue ornamented one of the public squares of Paris. In Spain they could only show to the Congress the modest bust of a contemporaneous writer, Dr. Benavente, whose fine sense of irony and literary talents had endeared his memory to the Spanish people and had been transmitted to one of his sons. If the Spanish schools and the Spanish press did not display evidence of wealth they were not lacking in ardour and good intentions. But they had to borrow much from other nations and in their haste to translate good foreign works into Spanish they often committed regrettable errors. Then the speaker went on to describe how much better industrial property was protected than was literary property. In regard to the medical press they must not have, he argued, too many restrictions, for knowledge must spread. On the other hand, the journalist was ever seeking for a new idea, a new discovery, and to give it a body and a means of presentation. Journalists had thus often the opportunity of strengthening, improving, or rendering more comprehensible a new idea or discovery. Now, a chemist who made a new explosive became a millionaire, but a medical man who discovered a new microbe or how to perform a new and useful operation, or found a new remedy, received nothing for his reward unless he was able to give his discovery a commercial aspect and thus to obtain protection. At best he only received a very feeble reward and some belated honours. The man of science could only claim that his authorship of the discovery should be recognised; but however widely this discovery might be noticed in the press he received nothing for it. If Krupp made a large fortune why had not Pasteur been similarly fortunate? He then went on to urge that the pure scientific idea, apart from the manner in which it was clothed and described, should be recognised as a property by the International Association of the Medical Press. The man of science sowed and the journalist cultivated the soil and the two together created a value, a property, which they should strive to protect from the charlatan and the adventurer. It was the mission of the medical press to endeavour to secure for the author of the new idea or discovery full recognition and adequate reward.

Dr. BLONDEL, speaking next, said he was pleased to see these generous ideas coming to the front again. But who was the first inventor or who was first to conceive a new idea? The most recent inventions were modern adaptations of what was already partially and sometimes completely known. Then such recognitions of the supposed author of ideas would lead to terrible conflicts arising out of complex financial interests. They of the press, said Dr. Blondel, did their best to render justice to the authors of new and useful ideas and did not willingly misrepresent the facts. Sometimes they committed errors, but as a rule justice was generally done at least in the long run. The author of an idea might get protection if he formulated and published his idea. How was it possible to take into consideration that which had not been formulated?

Dr. FERNANDEZ agreed with Dr. Blondel; it was right in principle to protect the mere idea but it was not practical.

Dr. TOLOSA-LATOUR replied that he was aware of all these objections, but were they to leave the idea or discovery of the man of science at the mercy of the journalist? The man who wrote a summary of a lecture in which the new idea had been propounded acquired a copyright of this summary description but the inventor himself had nothing at all, neither copyright nor anything else. A man might make a drawing of the new idea, or if it was an instrument then the instrument maker might manufacture the instrument, the one sell his drawing, the other the instrument, and both received something, but the real author got nothing, neither payment nor protection.

Professor CORNIL said that he was pleased to have heard this discussion but he thought that the case was fairly met by Article 3 of the statutes as drawn up at Monaco, which stipulated that the real author should always be recognised. On the other hand, public lectures were public property, just as were the speeches delivered in Parliament. The professor, he maintained, had no right over his lectures; he could not reserve any portion of his lessons. That had been fully established by the French law courts. Public instruction should be given to all and belonged to all so that all might learn.

The Congress then adjourned for lunch, meeting again in the afternoon, when Dr. LARRA read a report on the Spanish medical press. It had been in existence some two centuries. There was a military medical paper published in Madrid in 1773.

Dr. BLONDEL followed on a professional point—namely, the publication in periodical papers of reports of the proceedings of learned societies. These societies themselves issued reports of their own proceedings but they appeared at greater length and at a later date, perhaps weeks or months afterwards. From one point of view this was an advantage, but the work was not so carefully done. On the other hand, the great teachers were also more careless than they used to be. They now contented themselves in going to some scientific meeting where they made a few extempore remarks, trusting to the medical press to preserve their teachings. Some very great men had never given anything else to the public. This was a degeneration, for it encouraged carelessness. Dr. Blondel thought it was a disadvantage to the press as well as to the publications of the learned societies. As a matter of news it was smart work to give quickly the gist of what had been said, but the more serious reviews that appeared once a quarter suffered. The great names that used to illuminate the pages of such publications did not appear so often and they no longer had so many careful studies from their pens. Some papers in France gave six or more columns to reports of meetings of the Academy of Medicine and many professors were now content to trust to shorthand writers and had ceased to write anything themselves.

Dr. POSNER thought the picture given was exaggerated. In Germany some papers were the organs of the great scientific societies and it was their business to give in full all that they could obtain. [illegible] The object was to give all new [illegible] It was the professors' and [illegible]ot write long and carefully-thought-out papers. In Germany the general complaint was that these papers were too long. A little clever, crisp summarising would be very welcome so long as due credit was given to the authorities quoted.

Dr. BLONDEL replied that reports now appeared in 24 hours instead of two months and these reports were often almost *verbatim*, so that they destroyed all hope of subsequent and more careful publication.

Professor CORNIL remarked that as opinions seemed to differ they must give liberty to each to do as he thought best.

Dr. VIDAL said that a sharp line of demarcation should be made between what was but the bulletin or circular of a society and what was a *bonâ-fide* journal.

Dr. AVILEZ remarked that a real transformation was taking place and Mr. ADOLPHE SMITH insisted that the business of the Congress was with medical journals and not with publications that consisted simply of the transactions or proceedings of some one society.

Dr. BLONDEL again spoke, remarking that in Belgium the medical press was in danger of extinction through the competition of bulletins issued by societies and sometimes distributed gratuitously. These publications commenced merely as records of the proceedings of the society by which they were published. Then it occurred to someone that it would be useful to have a few advertisements, and as advertisers preferred journals scissors and paste were employed, a few leaderettes were written, and the bulletin was transformed into what pretended to be a journal. These publications were pushing the legitimate journals out of the field, at least in Belgium. Now in France there was a medical friendly society, l'Association des Médecins de France, and it had about 8000 members. It used to publish a bulletin which contained balance-sheets, a record of the widows and orphans of medical men who had been helped through the agency of the association, &c. Now, and so as to recruit more members, this bulletin was being forwarded gratuitously to all the medical men of France; then, so that those practitioners who did not belong to the association might be tempted to read it and perhaps ultimately to join and further so that advertisers might likewise be tempted to advertise, this bulletin had been converted into something like a journal, for it now contained a few original articles. The speaker wanted to know if a bulletin was to be considered a journal.

Dr. VIDAL said that a bulletin was paid for by the society it represented, it had neither editor nor staff; what it published was signed by the secretary of the society it represented and for the society. Therefore it was not a journal and the secretary of the society was not a journalist.

Dr. PITALUNGA (Italy) said that the double character of medical man and journalist somewhat complicated matters, particularly as there were three different kinds of periodical publications to be considered. There was the doubtful bulletin, the organ of a society; then there were the archives or reviews, solemn and ponderous, and appearing perhaps only once in three months. The merit of such a publication depended entirely upon the master by whom it was controlled and who published only careful and elaborate studies. It was all a question of the responsibility of the master. For his sake, and his sake alone, were such publications bought, and they were useful, for sometimes the master brought out young men who otherwise would never get a hearing. Then there was the *bonâ-fide* journal. He thought that it was easy enough to distinguish between these three very different categories of publications.

At this stage the Congress adjourned for the day.

THE FOURTEENTH INTERNATIONAL CONGRESS OF MEDICINE, MADRID.

(FROM ONE OF OUR CORRESPONDENTS.)

EXCURSION TO THE SOUTH OF SPAIN.

MUCH has been written of the discomfort endured by some members of the Congress who have lately returned from Spain. In many cases the discomfort was born of an imperfect knowledge of Spanish combined with a laudable, if child-like, wish to manage for oneself and not to be helped. It is pleasant, therefore, to record the successful issue of the excursions to the south of Spain under the guidance of competent conductors who did not exceed the moderate cost at first agreed upon. There were several of these excursions so arranged in point of time that the "caravans," as such parties are called by the railway officials, worked independently of each other, visiting the same towns in succession. In every case the parties had to be small, for the hotel and railway facilities in Spain are not great. One through train runs in each direction daily and on three nights a week there is an express with sleeping-cars attached. The track is single and the halts are many and long. Early breakfast and *déjeuner* are taken *en route* at a wayside station with the guard, engine-driver, and fireman, whilst dinner is usually served in the hotel either before starting or on arrival at the destination. Through carriages are only to be obtained as a special favour, the number of places in each train is as fixed as it used to be in the diligences, trains cannot be multiplied to suit the traffic, nor is it usual to add a carriage when the train is full. It is necessary, therefore, to give ample notice when a caravan of even moderate size intends to travel Seats must be booked some days in advance and the heavy luggage may be required 12 hours before the train starts, a custom which affords ample opportunity for an unauthorised and furtive examination of the baggage in the early hours of the morning. Passengers are still penned up in stuffy waiting-rooms until the train starts and, more irritating than all, the booking office is closed with exemplary punctuality ten minutes before the advertised time of departure. There are, however, [illegible] the carriages are comfortable, [illegible] punctual, and as the [illegible] the country is seen at leisure.

A long night journey of 350 miles intervenes between Madrid and Seville, but the glories of the latter town amply repay the traveller for the discomfort of getting there. The magnificent Cathedral which overtops all the other buildings in the city, the Alcazar, or ancient royal palace, with its Moorish Hall of the Ambassadors and its lovely hanging gardens thronged with nightingales, the copy of Pontius Pilate's house, and the Torre del Oro where the gold of Mexico was stored on its arrival in Europe, make Seville the most interesting city in the south of Spain. The clean and narrow streets, the trim patios or forecourts of the houses, the shops open to the street as in a bazaar, and the dozens of barbers all plying their trade in full view of the passers-by were the first indications to the caravan that the customs of Paris and Madrid had been exchanged for an older and more picturesque civilisation. Three days were spent at Seville, one being a Sunday to give an opportunity of attending high mass celebrated most gorgeously and impressively in the Cathedral. Part of another day was devoted to visiting Italica which was founded by Scipio Africanus as a sanatorium for his veterans. A fine amphitheatre remains but there are not even ruins of the town where the emperors Trajan, Hadrian, and Theodosius first saw the light.

Three clear days did not exhaust the charms of Seville, for the whole time might well have been spent in the picture gallery amongst the Murillos which vie with, if they do not actually excel, the magnificent collection at Madrid. The fourth day was spent in traversing the 280 miles which separate Seville from Granada. The party was certainly routed and its individual members were nearly destroyed on their arrival by the touts of the different hotels in the town. But rooms had been secured in the Washington Irving Hotel within the grounds of the Alhambra and after a very late dinner most of the caravan went to bed, preferring to imagine rather than to see the beauties of the ancient Moorish palace as revealed by the light of a full moon. The next day was devoted to an exploration of the Alhambra, but it was not seen to the best advantage, for the weather was cold and dull, whilst the beggars were noisy and importunate. The beautiful gardens of the Generalife were visited and as a point of honour a drive was taken through the gipsies' quarter. The visit was not made without some trepidation on the part of the ladies, for one party had an escort of soldiers and another had ominous tidings of the newly committed murder and robbery of a Spanish gentleman who had been quietly returning home on the previous evening. The gipsies appeared, however, as picturesque villains dwelling in caves much after the fashion of our ancestors, but with greater conveniences, prolific in children much given to halfpence and posture dances.

The caravan proceeded from Granada to Cordova, a distance of 140 miles, at the leisurely rate of ten miles an hour, a speed which gave ample time to survey the beauty of the Sierra Nevada, the constant covering of snow of which must be so grateful a sight to the inhabitants of the hot and wide plain beneath. The mosque at Cordova surpassed even the extravagant expectations which had been formed about it, so that the sightseer was prepared to condone vandalism which had built a great Christian church in its very midst, for the very size of the church revealed the immensity of the mosque within which it was hidden. The mosquitoes here became troublesome and there were few who did not welcome the time when they climbed into their sleeping-berths at Cordova to awaken in the plains of La Mancha whilst passing windmills any of which might have been successors to those tilted at by Don Quixote. The morning café was enlivened by the report that as the train had been overcrowded on the previous evening the night had been spent in depositing 30 or 40 would-be passengers at different wayside stations to reach their destinations as best they could and to learn the lesson that seats in a first-class train on a Spanish railway must be booked beforehand. The return journey from Madrid was as straightforward as the outward journey had been, for the Sud Express has admirable accommodation both for sleeping and refreshment. The caravan reduced itself to constituent units at Biarritz.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

An Eye Infirmary for Bangalore.—The Indian Medical Services.—The Increasing Plague Epidemic throughout India.—Accidents in the Streets of Indian Cities.—The Practice of Sati in India.

AN eye infirmary, estimated to cost Rs. 150,000, will shortly be built by the Mysore Durbar in connexion with the Victoria Jubilee Hospital erected during the late regency on the *glacis* of the Bangalore fort.

The proposal to form one body out of the various subordinate medical services in India by combining them into a single corps under the title of the Indian Army Medical Corps has been finally negatived.

The following figures are interesting as showing how the plague epidemic has spread in India during recent years. There were in 1897 56,000 recorded deaths; in 1900, 93,000; in 1901, 274,000; and in 1902, 577,000. During the first three months of the present year the mortality was 334,000, that in March last being no less than 136,000. The reduction in the plague mortality throughout India reported for the week ending April 11th has not been maintained. Once again a marked rise to 32,159 has occurred which is more than accounted for by the Punjab alone, where the plague mortality is now greater than in all the rest of the country put together, having gone up from 13,225 to 18,488. This is the history of last year repeating itself. There was an increase of about 1000 deaths in the United Provinces, bringing the total there to 4382. The counterbalancing decreases occurred in the Bombay presidency and in Bengal. In the United Provinces 12 cities are now suffering, including Allahabad, Agra, Benares, Cawnpore, Lucknow, Meerut, and Bareilly. The disease is now raging very fiercely in Karachi, but there are better returns from Bombay city and from Calcutta. The severe and continued prevalence of plague in Bombay city has led to the enlargement of the Marathu Plague Hospital. Five new wards have just been opened. They have been presented by some of the leading inhabitants and are constructed of red brick with Mangalore tiles and neat paving. They will prove a great improvement on some of the existing sheds. This hospital in Bombay has always been popular, the reasons given being that it is cheerful in appearance, is centrally situated, and is of sanitary construction; that there is an option given to all patients of native or European treatment; and that there is great freedom of access for the relatives.

The frequent accidents in the streets of the two cities of Calcutta and Bombay have drawn attention to the imperfect means in both cities for the conveyance to hospital of injured or sick persons. There are very few ambulances in Bombay and still fewer in Calcutta and the delay which occurs when there is an accident is a matter of public comment in both cities. Some attempt is about to be made in Calcutta to remedy this grievance, but unless the police are made responsible for the removal to hospital of these cases the provision of ambulances will not be of much avail. At present in both cities the want of the necessary organisation and material is a disgrace.

Although Sati or the burning of the widow on the funeral pyre of her husband was prohibited by the Government many years ago the practice is occasionally kept up in out-of-the-way places and in secrecy. This shows that the custom still lingers and the manner in which it is referred to by the native press also shows the underlying sympathy with this horrible form of cruelty. Although burning is now rare, the suicide of widows in other ways has to a certain extent taken its place, and every widow who kills herself on the death of her husband is styled a heroine. There is a widely-rooted idea that the wife should not outlive her husband and it is probable that if British rule were removed the old practice would be revived. The ideas are said to be founded on religious sanction, but the putting to death of innocent young lives ought not to be tolerated. If Hindu society cannot purify itself from such barbarous customs it will never gain the respect of educated and right-thinking persons, and if the encouraged practice (and it is apparently encouraged very strongly) continues the Government of India may be called upon to interfere.

April 30th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Manchester Coronership.

EVER since the death of Mr. Smelt, the late Manchester city coroner, there has been a good deal of interest shown as to the appointment of a successor. Some weeks ago the town hall committee of the county council, to which the preliminary task of making a selection to be afterwards submitted to the council was committed, reduced a list of 26 applications to six and then recommended a member of the medical profession for the office. There was no question as to his fitness, although he had had no previous experience of the work, but unfortunately he was at the time of his application as a candidate a member of the council and a member of the committee by which he was recommended for the coronership, although he afterwards resigned his membership of the council. At the subsequent meeting of the council the recommendation of the town-hall committee was set aside, as his appointment would have been on the extreme verge of legality if not absolutely illegal, and the matter was referred to a new committee specially chosen. This committee on May 8th selected six names from the original 26, setting aside the gentleman recommended by the town-hall committee and also another who is one of the legal staff in the town-hall, and substituting the names of two others of the candidates. After seeing each of the six, votes were taken and after the preliminary rounds there were 11 votes for Mr. Gibson and eight for Dr. Sellers and then the committee voted unanimously for Mr. Gibson who was chosen for the approval of the city council. Though it is not absolutely certain that the choice of the committee will be approved at the council meeting to be held to-morrow it is almost certain, for this time there is no illegality to bar the way, and Mr. Gibson comes with good credentials. He was educated at Trinity College, Cambridge; is B.A. and LL.B. with honours in the Law Tripos in 1883. He was called to the bar and practised at the bar of the Northern Circuit in Liverpool. In 1898 he began to study medicine at University College, Liverpool, and has passed all the examinations for the M.B. and Ch.B. except the last part of the final, for which he is not entitled to enter until July. He has been deputy coroner for Liverpool since 1892 and has conducted over 3000 inquests. "He stroked his college boat at Cambridge and he devotes holidays to mountain climbing." As there is only one coroner for Manchester it was certain that 25 out of the 26 candidates, many of whom were notably well qualified, would be disappointed, and one can only express sympathy with the unsuccessful.

A New Hospital for Skin Diseases.

The Manchester and Salford Hospital for Diseases of the Skin, established in 1884, has outgrown the accommodation to be found at the modest building in Quay-street and a new hospital is to be provided. It will have a frontage to Quay-street and Byrom-street, and will accommodate 28 in-patients and a large number of patients for "light treatment." The out-patients' waiting-hall on the ground floor is planned for 200 patients and suitable consulting rooms are connected with it. The appliances for "light treatment" will be used on the first floor and the in-patients will be on the second floor where three pavilion wards are grouped in separate wings. The cost of the buildings is estimated at about £14,000.

John Dalton.

To-day and to-morrow the Manchester Literary and Philosophical Society celebrates the centenary of the announcement of the atomic theory by John Dalton, the most distinguished of its presidents. This afternoon Professor F. W. Clarke of Washington, U.S.A., will deliver the Wilde lecture on the atomic theory at the society's house in George-street. This will be followed by a dinner in the evening, quite in harmony with Dalton's views. For we are told that in his simple and regular life his "only diversion from chemical experiment was the game of bowls, which he played with infinite zest on the green of the Dog and Partridge near Stretford, every Thursday afternoon." After undergoing this exertion "he would go home to consume the food needed to supply the metabolism of the body and to sleep in order to obtain further nerve power for the next day's brain work." In this case the next day's work will be a degree ceremony of the Victoria University in the Owens College, when Earl Spencer will confer the honorary degree of D Sc. on Professor Clarke and on Professor I. H. Van't Hoff of Berlin. This is not the place to give even a slight sketch of the career of the Quaker philosopher, but the story of his one love affair—which came to nothing, for he never married—is so quaint as perhaps to excuse its appearance here. He became attached to a lady who was accounted the "handsomest woman in Manchester." But as he wrote to his brother he felt himself secure against mere beauty, but "she began to descant upon the excellence of an exact acquaintance with English grammar and the art of letter-writing; to compare the merits of Johnson's and Sheridan's dictionaries; to converse upon the use of dephlogisticated marine acid in bleaching; upon the effects of opium on the animal system, &c., &c. I was no longer able to hold out but surrendered at discretion" He died in July, 1844. His remains were placed in the old Town Hall and it is said that 40,000 persons went to pay their last tribute of respect "to the Quaker chemist who had made Manchester famous throughout the whole learned world."

Manchester Infirmary Site.

The petition of the Manchester corporation for the insertion in the Bill now before Parliament of an additional provision relating to its acquisition of the site of the Royal Infirmary was yesterday before the examiner of standing order proofs. *In point of time* as to the publication of notices this provision of the Bill had not, of course, complied with standing orders and the examiner will so report to the committee which will be asked to dispense with these formalities and will, no doubt, accede to the petition.

New Hospital for Mid-Cheshire.

On May 8th Mr. J. Cawley, architect, was appointed to carry out the erection of the joint hospital. It is to have 34 beds, and the cost, exclusive of site and furnishing, should not exceed £8500 or £250 per bed.

Small-pox Costs.

The anti-vaccinationists will, no doubt, be delighted to see that the estimates for vaccination fees and expenses for the half year, for the four unions of Manchester, Salford, Chorlton, and Prestwich, *owing to the persistent lingering of* small-pox, amount to £5800.

May 19th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Workhouse Nursing.

THE recently issued report of the Local [illegible] Board departmental committee which was appo[illegible] quire into the nursing of the sick poor in workhouses was under discussion at Malvern on May 12th at the annual conference of Poor-law guardians from the West Midland district. Dr. Arthur H. Downes, one of the Poor-law inspectors of the Local Government Board, at the outset pointed out with satisfaction that within the past seven years there had been an increase of 52 per cent. in the number of paid officers engaged in nursing the sick in England and Wales, an evident *proof of the efforts of guardians to provide* paid and re*sponsible nurses in the place of unpaid and irresponsible* inmates. The increase had been more especially noticeable in the country workhouses. Dr. Downes then dealt with the difficulties attending not only the procuring of nurses but also in retaining their services. He urged boards of guardians to provide comfortable quarters, varied food, sufficient recreation, and not to overwork *their nurses. He also advocated the establishment of* training schools for nurses and emphasised the importance and *necessity in the interests of economy of having a* whole-time medical officer in all large workhouses. The departmental committee, he said, considered that in workhouses where the average daily number of sick was below 100 the matron, if properly trained and with suitable assistance, might act as superintendent nurse. The experience of the *Atcham union in Shropshire* and *of the Stoke-on-Trent union* with regard to the adoption of the recommendations of the departmental committee differed in a remarkable degree. The chairman of the Atcham board of guardians said that within the past few months seven superintendent nurses had come and gone at the Atcham workhouse and the board had found the greatest difficulty in obtaining nurses. The clerk to the Stoke-on-Trent union, which is one of the largest in *the country, related, on the other hand, an entirely different* experience and he thought that the fact of there being a nurses' home at Stoke-on-Trent was one reason why nurses stayed with them a considerable time and why they had no difficulty in obtaining a supply of nurses. Miss Gibson of the Birmingham Infirmary considered that it was quite impossible to train a nurse properly in an institution with only 60 or 100 patients. She was of opinion that no nurse should be appointed to a workhouse who had not been at least one year in a training school.

Imprisonment under the Infectious Disease (Notification) Acts.

A medical man lately practising in the Rhymney valley has suffered imprisonment for failing to comply with the requirements of the Infectious Disease (Notification) Acts. For neglecting to notify a case of infectious disease to the medical officer of health the gentleman in question was called upon to appear before the magistrates and in spite of his protestations that he had acted quite inadvertently and, indeed, that he had actually written out the certificate but had forgotten to post it, a fine was inflicted with the alternative *of a month's imprisonment.* As he declined to pay the fine he was taken to Cardiff gaol on May 9th but was released three days later after his friends had paid it.

Cardiff Grouped Poor-law Homes.

The Poor-law guardians of Glamorganshire have long recognised the desirability of taking the children under their care away from the workhouses. At Pontypridd, Bridgend, Neath, and Swansea grouped homes have been in use for several years and on May 13th the Cardiff board formally opened similar homes at Ely, an outlying district of the town. The Ely houses include two semi-detached and two detached cottages, each with accommodation for 12 children, and there is one larger house with room for 24 children. There is thus provision altogether for 72 children. In addition to these buildings there are a house for the superintendent, a store house, a small hospital, and suitable playgrounds. The cost of the scheme is about £8000 There are also in the Cardiff union 234 children living in 24 scattered homes. So long ago as 1863 the Cardiff workhouse children were housed in separate school buildings at Ely and these will now be used as an auxiliary workhouse.

Rural Water-supplies.

Rural district councils as a rule place a very broad interpretation upon the provisions of section 6 of the Public Health (Water) Act, 1878, which prohibits the occupation of [illegible] within a reasonable dis- [illegible] *wholesome water. It* [illegible] when the members of [illegible] effect to this section they are not supported by the local bench of magistrates.

The St. Mellons (Mon.) rural district council recently refused a certificate of occupation for a newly erected house within its district on the ground apparently that although there was a well on the premises the medical officer of health (Mr. W. E. James) reported that the water could become polluted by surface drainage and the supply was not a proper one. The owner of the house thereupon appealed to the justices who decided that the house might be occupied.

Typhus Fever and Small-pox at Cardiff.

Until the past few weeks typhus fever had been absent from Cardiff for many years. During the second week of April a case was reported in the town, and three weeks later it was found that four more persons were suffering from the disease. The outbreak has been traced to a man who came from Liverpool where 120 cases have occurred during the present year. At the beginning of May there was a recrudescence of the epidemic of small-pox in Cardiff which has been attributed to a barber who had been carrying on his business for nearly a fortnight while suffering from a mild attack of the disease. Altogether ten persons were infected from this source.

An Honorary Degree for Lord Lister.

At the congregation of the University of Wales which will be held at Cardiff in November next Lord Lister and Lord Kelvin will have conferred upon them the honorary degrees of doctor in science. The resolution relating to Lord Lister was unanimously passed at the annual extra collegiate meeting held on May 14th at Llandrindod and referred to his "long-continued scientific research which, by establishing a system of antisepsis, has revolutionised the practice of surgery throughout the world."

Notification of Measles.

At the meeting of the Midsomer Norton (Somerset) urban district council held on May 11th it was decided to include measles under the diseases which are notifiable under the Act of 1889 for the ensuing five years. A letter was read from the Local Government Board stating that the Board had the subject of the notification of measles generally under consideration and that the advantages from the addition of measles to the list of notifiable diseases were largely dependent on the notification, together with the attendant measures of prevention, being maintained for a reasonable number of years.

Vaccination Grant.

Mr. J. Dibble Staple, the public vaccinator for the Ashley district of the Bristol union, has been awarded the grant for successful vaccination by the Local Government Board for the third consecutive time.

May 19th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Visit of the King and the Queen to Glasgow.

GLASGOW on May 14th was happy in being honoured by a visit from the King and the Queen and the city, in spite of the unpropitious weather, showed itself to as great advantage as possible. Dense crowds thronged the entire length of the route which their Majesties took through the city and at every point they were received with the greatest enthusiasm and loyalty. The arrangements were perfect and the whole proceedings passed off without any serious accident to mar the success of the visit. The King on this occasion was pleased to lay the memorial stone of the new technical college in George-street. This ceremony took place before a large and representative gathering of the citizens, there being invitations issued to over 2500 guests. Glasgow has always been acknowledged as the commercial capital of Scotland and it is a matter of extreme satisfaction to the whole community that the Royal visit has been associated with an event so auspicious and one which must prove of good augury for the future of technical education in general and of this school in particular. Their Majesties during their progress through the city visited the new art galleries where the scene, in spite of the unfavourable weather, was very brilliant. They visited also the University, the foundation-stone of which was laid by themselves (as Prince and Princess of Wales) 35 years ago. Lord Balfour of Burleigh, the Secretary for Scotland, in the presence of a large gathering in front of the University, introduced Principal Story who, on behalf of the University authorities, briefly thanked their Majesties for honouring the University with a visit and presented an address. The King, in replying, recalled with satisfaction his own share in laying the foundation-stone of the noble building and recognised it as a true symbol of the greatness of the University which had adapted itself to the commercial expansion of the city. In concluding he expressed the earnest desire that this university and other universities as schools of higher learning might grow and prosper and so advance the material prosperity of his people.

Small-pox in Scotland.

On May 18th the Local Government Board of Scotland intimated that during the period from May 1st to 15th inclusive five cases of small-pox had been notified to it from the burgh of Dundee and one from the burgh of Glasgow.

May 19th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Irish Medical Association.

A MEETING of medical men, chiefly belonging to the Poor-law medical service of Belfast and surrounding districts, was held in the Medical Institute, Belfast, on May 6th, to consider the advisability of forming a Belfast and District Branch of the Irish Medical Association. There was a large attendance and on the motion of Dr. A. Mussen, J.P. (Glenavy, co. Antrim), seconded by Dr. D. P. Gaussen (Dunmurry), Professor J. W. Byers was called to the chair. Dr. A. Gardner Robb (honorary secretary *pro tem.*) having read several letters of apology from medical men unable to be present, Professor Byers, after thanking those present for asking him to preside, said that it was of the utmost importance that the grievances under which the Irish Poor-law medical officers laboured should be made public in order that they might be redressed. He said that these grievances were, in the main, inadequate remuneration, no fixed holidays, and no superannuation. So long as these grievances remained such a state of affairs was bad for the medical men concerned, degrading to the Poor-law medical service in Ireland, and injurious to the best interests of the country. An underpaid and overworked service would in the end be avoided by young men of ambition and ability starting life. He believed these grievances could be got rid of in two ways: (1) by the policy at present advised by the Irish Medical Association of the members of the medical profession combining and refusing to offer themselves as candidates for any vacancies that may arise until the authorities in the interests alike of the people as well as of the profession decided to improve the conditions of the service; and (2) by the help of the profession outside the Poor-law medical service. It was the bounden duty of every member of the profession to try to remove the grievances that pressed hard on any member of it and above all to bring contentment and happiness to all those who practised it. Speaking as one outside the Poor-law medical service he could promise that every help would be given to the dispensary medical officers of Ireland by all branches of the medical profession until their grievances were redressed. It was then decided to form a Belfast and District Branch of the Irish Medical Association and the following office-bearers were appointed:—President: Professor Byers. Vice-President: Dr. S. B. Coates. Secretary and treasurer: Dr. Robb. Members of Council: Dr. W. R. Davison (Ballymena), Dr. J. St.C. Boyd (Belfast), Dr. Mussen, Dr. J. M. Killen (Larne), Dr. Gaussen, Dr. J. J. Adams, J P. (Ashville), Mr. J. D. Osborne (Belfast), Dr. J. McLiesh (Belfast), Mr. H. C. Manley (Whitehouse), and Dr. R. J. Munn (Belfast). The president, vice-president, and secretary, with Dr. Adams, Dr. Gaussen, Dr. Davison, and Mr. R. Currie were appointed delegates from the branch to the annual meeting of the association to be held in Enniskillen in June. The next meeting of the branch is to be held on June 30th.

Dispensary Contest in the Ardee Union.

For several months the position of dispensary officer to the Drumconrath district of the Ardee Union, co. Louth, has been vacant. The original salary was £120 per annum, with £30 as medical officer of health. In October, *1902*, the guardians advertised the position at the old salary but there were no applicants. They refused to revise the salary and postponed making any appointment for several months They advertised again at the old salary and on May 5th there were two applicants—one from Lucan and Mr W H Crean, medical officer at the Ringville Dispensary, Dungarvan, co Waterford, who was elected Had the salary been raised to £200, the minimum suggested by the Irish Medical Association, two local men would have applied, but they loyally adhered to the resolution of the local branch of the association and did not apply for the position Although this appointment may in one sense be regarded as a victory over the Irish Medical Association it is satisfactory to find that 10 of the guardians voted for making no appointment, while those who elected Mr Crean numbered 16

Royal Victoria Hospital Belfast

At a largely attended meeting of the board of management and life governors of the Royal Victoria Hospital, Belfast, held on May 6th Dr J S Morrow was appointed assistant physician, Mr J A. Craig assistant ophthalmologist, and Mr R J Johnston assistant physician for diseases of women Dr S Blakely was appointed house surgeon

The Sanitary Condition of Newry

Dr C J Clibborn (Local Government Board medical inspector) has reported to the Newry urban council that the sewerage of the Armagh side of the town of Newry is very defective If the sewerage of the town were improved, the removal of refuse through dwelling houses stopped, and a better class of privies built Dr Clibborn thought that the number of cases of infectious diseases would be lessened He also recommended an ambulance for the conveyance of patients with infectious disease

Pulmonary Tuberculosis in the Belfast Workhouse

A deputation from the Belfast board of guardians met the members of the public health committee on May 7th to discuss the steps to be taken to deal with the large number of consumptives in the Belfast union workhouse, when it was decided to appoint a committee of both boards to go fully into the question

The Poor law Guardians in Ireland and the Medical Profession

The constant friction between the medical profession and the Poor law guardians in Ireland continues Here are the latest examples As appears in THE LANCET of May 9th, p 1340, a meeting was held in the Medical Institute Belfast, on April 30th to form a North Down Branch of the Irish Medical Association at which Dr F P MacLaughlin and Mr J W Olpherts were present The attention of the Downpatrick guardians having been called to this circumstance the clerk was directed to write to ask these gentlemen for an explanation why they left their districts without having first notified the board of guardians or the relieving officer Mr Olpherts replied that during his few hours' absence on April 30th he left the district in charge of a thoroughly competent medical man and by arrangement, as to why he left his district it was, he wrote, to attend a meeting in Belfast to form a branch of the Irish Medical Association and to defend professional interests In the other case Dr E C Thompson M P, complains in a letter to the Omagh board of guardians that at its last meeting it perpetrated on him a most unmerited insult and one which he bitterly resents It appears that Dr Hans B Fleming, who had been ill four days before the meeting of the board owing to an unfortunate accident, nominated Dr Thompson as his substitute at the workhouse (a position he had on many previous occasions taken for him) and without a word of explanation the guardians dispensed [illegible] medical man in his place [illegible] he had acted on many other [illegible] out fee, yet upon the first oc [illegible] the guardians might have been called on to pay for a substitute for Dr Fleming they turned [illegible] appointed another medical man [illegible] this action on the part of the [illegible] ignorance and inexperience' in dealing with such matters and he demands a cheque for £12 12s for his four days' attendance at the workhouse, which the board says it could not entertain the idea of paying It is to be hoped that Dr Thompson will press his claim

Tuberculosis in Ireland

The committee of the Dublin branch of the National Association for the Prevention of Tuberculosis has recently issued a little book entitled "Consumption and its Prevention" in which the fact is emphasised that while consumption is decreasing in England, Scotland, and Wales there is still a steady increase in Ireland It appears that between the ages of 24 and 35 years almost one half the deaths are due to consumption which caused an eighth of the entire death rate of the country The authorities of the National Education Office have undertaken to circulate this pamphlet amongst the managers of schools under the board and between 10 000 and 15 000 copies will soon in that way be distributed over Ireland

May 19th

PARIS

(FROM OUR OWN CORRESPONDENT)

Alcoholic Cirrhosis and Crypto tuberculosis

AT the meeting of the Hospitals Medical Society held on May 1st M André Jousset gave the result of some experiments which he had made with a view of elucidating the rôle played by Koch's bacillus in the production of hypertrophic alcoholic cirrhosis He had found that the ascitic fluid which accompanies this kind of cirrhosis very frequently contains bacilli, while the same thing apparently exists with regard to the spleen In two cases inoculation with hepatic parenchyma after the blood vessels of the glands had been washed out had caused a guinea pig into which it was injected to became tuberculous and the same thing happened in [illegible] injection of spleen pulp M [illegible] on the importance of these [illegible] explained in some degree the nature of numerous obscure febrile attacks and also showed that these bacillæmias were curable at least for a time M Mosny said that, he did not think that the simple presence of Koch's bacillus in the effusions was enough to enable the observer to say that the disease was really tuberculous For instance, there were very many cases where some disease, such as acute pneumonia or hepatic cirrhosis lighted up a tuberculosis which had hitherto been only smouldering In these sort of cases there was a secondary tuberculisation of a diseased condition which was originally of a totally different nature M Bezançon agreed with M Mosny and referred to cases of cancer, of secondary tuberculosis and of leukæmia complicated with other kinds of infections He further remarked that it was known to be difficult to differentiate Koch's bacillus from acid resisting bacilli M Chauffard asked whether these acid resisting bacilli could not closely resemble tuberculous bacilli found in the sputum The question, he thought, was very important

Physiological and Therapeutical Action of Cecropia

At the meeting of the Biological Society held on May 2nd Mr Gilbert and Mr Carnot described the investigations which they had made with regard to the physiological and therapeutical properties of a foreign plant called cecropia The alcoholic extract which they employed was of comparatively low toxicity and could be used in large doses without the production of untoward symptoms Cecropia, like digitalis, seems to be cumulative in its action a property which explains the persistence of its effects for a period of several days It acts on the heart principally by increasing the energy of contraction of the cardiac muscle As shown on sphygmo-manometric tracings, the amplitude of the pulsations is doubled, tripled, or even increased to a greater degree and this effect persists for a somewhat long time, when poisonous doses are given the pulse becomes slow and its tension is reduced Cecropia acts on the kidneys as a diuretic and may increase the flow of urine to three or four times the normal amount. In their clinical trials of cecr [illegible] alcoholic extract to [illegible] having extreme weal [illegible] 30 drops every 24 hours continued for four or five days. On and after the third day there was copious diuresis A patient who had been passing only 500 cubic centimetres (17½ fluid ounces) of urine daily and had taken cecropia for five days passed 700 cubic centimetres on the second day, 2500 on the third, 3100 on the fourth, 2800 on the sixth and 2500 on the seventh The patient's general condition improved at the same time, his dyspnœa was less urgent, and his pulse, which at first could not be counted, became slower and regular This very remarkable effect was obtained almost invariably and was comparable to that of digitalis. Cecropia is, however, much less poisonous than digitalis.

Obituary.

Dr. Dreyfus-Brisac, physician to the Hôpital Beaujon, whose death is announced, was born in Strasbourg in 1849 and in 1869 was "externe" at hospitals in that city. He served as a volunteer in the Franco-German war in 1870 and after the annexation of Alsace-Lorraine to Germany he removed to Paris where he took his medical degree in 1878 and became hospital physician in 1880. He took a great interest in questions relating to poor relief and was a member of the conseil supérieur of the Assistance Publique. He was created Chevalier of the Legion of Honour in 1893.

May 19th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Nerve-grafting.

Professor Körte and Professor Bernhardt have recently published in the *Deutsche Medicinische Wochenschrift* a case in which a divided facial nerve was successfully dealt with by grafting it on to the hypoglossal nerve. The patient was a woman, 38 years of age, suffering from inflammation of the left middle ear, which she said had come on after "influenza." Paracentesis of the tympanum had been performed without success and the suppuration and fever continued so that the radical mastoid operation became necessary. In the course of the operation it was found that the anterior wall of the lateral sinus was covered with granulations and that there was pus between the sinus and the bone. In the removal of the diseased bone the sinus was fully exposed to view as far as the jugular foramen and the base of the petrous bone was removed nearly to the carotid canal. The facial nerve was cut through close to the stylo-mastoid foramen and the posterior wall of the cartilaginous portion of the meatus was divided. The large cavity thereby produced was then washed out and drained with strips of iodoform gauze. The peripheral extremity of the facial nerve was now exposed as far as the parotid gland, after which, by means of a curved incision, the hypoglossal nerve was brought into view where the digastric muscle goes across and was traced upwards towards the base of the skull. The peripheral extremity of the facial nerve was then attached laterally to the trunk of the hypoglossal nerve with two fine catgut threads. The wound in the neck was sutured and primary union followed. After the operation there were complete paresis of the left facial nerve and partial paralysis of the left hypoglossal nerve; the tongue when protruded showed a slight deviation to the left and there was also some difficulty in swallowing. The operation was performed by Professor Körte on Dec. 20th, 1901, and on Feb. 3rd, 1902, Professor Bernhardt found that the left facial nerve remained completely paralysed, that with the induced electric current there was no reaction in the area supplied by the left facial and hypoglossal nerves, but that with the battery current there was a retarded "closing contraction." There were, in fact, the typical reactions of degeneration. The deviation of the tongue towards the left and the atrophy of its left side were still obvious. Electricity (constant current) was then applied daily but without apparent result until June 18th, when Professor Bernhardt for the first time observed traces of return of movement in the muscles of the left corner of the mouth. In the beginning of December the reaction of degeneration had disappeared but the reaction to both the battery current and the induced current was only slight. When the patient tried to move her tongue the facial muscles participated in the movement of the tongue and *vice versâ*. There still remained some paresis of the facial muscles on the left side, but voluntary movement of the left corner of the mouth and of the tongue was possible. The case showed that the power of coördinate movement might be restored after nerve-grafting. Similar results have already been obtained by Manasse and by Dr. Robert Kennedy of Glasgow,[1] both of whom united the facial nerve and the spinal accessory. It is of physiological interest to observe that in the above cases the hypoglossal centre or the spinal accessory centre became competent to supply the innervation of the facial muscles which had previously been supplied by a quite different centre.

Sanitation in Health Resorts.

The Prussian Minister of Public Instruction in his capacity of chief of the Government medical department has issued regulations relative to the sanitary arrangements of health resorts and spas. Every health resort in which, or in the vicinity of which, there is no hospital must provide accommodation for the temporary isolation of persons suffering from infectious diseases and must also provide a place suitable for the reception of the bodies of patients who may die. Apparatus for disinfection is kept in the more important health resorts but will now have to be provided by the smaller ones as well. For the latter disinfection by means of formalin is recommended on account of the necessary apparatus being moderate in price and easy to manage. The work of disinfection must be done by a public official and in places where such an appointment has not yet been made the Minister recommends that a suitable person should receive instruction in the duties free of charge in the hygienic institution under the control of a university or a province. In health resorts disinfection must be carried out not only in the cases in which the law already requires it—as, for instance, in scarlet fever, diphtheria, small-pox, and enteric fever—but also in pulmonary tuberculosis. Spittoons are to be provided in public places and buildings and notices are to be displayed requesting persons to refrain from spitting on the floor. Arrangements are also to be made for rendering first aid in accidents; moreover at seaside resorts the necessary requisites for the resuscitation of cases of apparent drowning are to be provided.

May 18th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Plague.

THE bubonic plague seems to be dying out in all the States. A case occurred at Geraldton, West Australia, on board a steamer from Singapore and was diagnosed as fever. On arrival at Fremantle the case was pronounced to be one of plague and the vessel was quarantined. No other case has occurred. Rats examined at Brisbane have been found to be infected with plague. Rigid precautions are still taken by the health authorities in all the States to prevent the introduction of the disease and to insure cleanliness and destruction of rats.

Typhoid Fever.

Typhoid fever has been prevalent in some parts of New South Wales, especially Coonamble and Balmain. 135 patients in the Coonamble Hospital are affected with typhoid fever. At Balmain it was proposed that the aldermen themselves should make a house-to-house inspection as the sanitary inspectors were too busy.

Lunacy Administration in Victoria.

In reply to questions in the Legislative Assembly of Victoria the Chief Secretary recently stated that the Victorian asylums had fewer medical officers than the New York State asylums, but the position of many of the American officers was very junior and they were paid low rates of salary. The English asylums had about the same proportion of medical staff as Victoria, but in the former place the medical superintendents were paid very much more than in the latter. A slightly larger number of attendants was allowed in America than in Victoria and the question of providing an adequate staff for the asylums was now under the notice of the Public Service Commissioner. The training of the attendants was in the hands of the medical staff and there was a probationary service of 12 months, during any portion of which time inefficient employés might be removed. As there were very few applicants for the position of junior medical officer it would appear that the medical staff was underpaid or that some other drawback existed, as the juniors actually got more pay than in England or America. Mechanical restraint of patients had in the past been much resorted to, but for the past three years special attention had been given to its reduction. Arrangements had been made for trained female nurses in the male hospitals, but at present the male hospitals at Kew and Yarra

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[1] Proceedings of the Royal Society of London, 1900; Philosophical Transactions, 1901; see also THE LANCET, Feb. 17th, 1900, p. 449.

Bend were in charge of men who were there for some years and who were specially appointed as being suitable. Subsequently a deputation from the Medical Society of Victoria waited on the Chief Secretary and urged the necessity for immediate and extensive reform in the treatment of the insane in Victoria. The president, Mr. R. Hamilton Russell, stated that the Medical Society of Victoria regarded it as established that the present asylums in Victoria were lamentably behind the times in many fundamental respects, that there was pressing need for the better treatment of early and doubtful cases of insanity, and that there was an urgent necessity for suitable provision for insane patients whose relatives were able to contribute at higher rates of maintenance as distinct from the large number who by reason of their poverty were legitimate objects of State charity. There was also serious overcrowding, the ill-effects of which were aggravated by structural unfitness and insanitation. The staff, both medical and general, was inadequate and was subject to no proper mode of selection, training, and promotion. This defect was further aggravated by the fact that promotion in all classes went by the rigid rule of seniority, irrespectively of efficiency, and that officials once installed were practically irremoveable. The society believed that the present regrettable condition of affairs would continue so long as responsibility was divided, as it was at present, between inspector, Under Secretary, Chief Secretary, and Public Service Commissioner. The remedy was to place the entire control of all asylums in the hands of a lunacy board of three which should comprise the inspector and the Master in Lunacy, with a third member. For the better treatment of early and doubtful cases of insanity the establishment of a receiving house was essential. It was also considered that there was urgent need for enabling patients who were in a position to pay higher rates of maintenance to be treated in institutions other than those devoted to the cure of the legitimate objects of State charity. Until the Government saw its way to establish an institution for this purpose the society suggested the legalisation of properly licensed private institutions. Professor H. B. Allen said that of every 1000 [illegible] were relieved from their [illegible] 420 were curable, but [illegible] onditions obtaining in Victorian asylums were not conducive to cure. In reply the Chief Secretary said he did not think that trained attendants were necessary or that those in the Victorian asylums were incompetent. He approved of the establishment of a receiving house and a sum of money had been voted by Parliament for the purpose and a site had been selected at the Royal Park. He also thought that power should be given to the Government to license asylums under private supervision.

Proposed Hospitals for Consumption.

Last year the Government of New South Wales proposed to establish a hospital for consumption at Khuring-gai Chase, near Hornsby. The residents strenuously objected and the proposal was dropped. It has been recently revived and the residents have held an indignation meeting and arranged for a monster deputation to the Premier objecting to the proposal to establish a hospital to accommodate 300 incurable cases of consumption on a site of only 50 acres, close to a large population, while other and better sites were available.—Alderman Dr. W. Camac Wilkinson at a recent meeting of the Sydney city council secured the reference to the proper officers of the council of the question of the power of the council to expend money for the prevention of the spread of consumption, and on the cost of a site and of the erection of a dispensary for the treatment of consumptive cases. His suggestion was for the establishment by the council of such an institution in the city. Such an establishment would, he contended, be the first link in a chain, as it would lead to voluntary notification, which would be followed by instruction to the sufferers and their friends and in turn by inspection and disinfection of premises.

Medical Women and Hospital Appointments.

A deputation from the Progressive Women's Association recently waited on the President of the Board of Health of New South Wales to request that medical women should be appointed in all public institutions. The President replied that he had appointed a medical woman at the Coast hospital, the only institution over which he had control.

Preservatives in Food.

The duty of regulating the use of preservatives in food is laid upon the Board of Health by the Public Health Act of New South Wales and the question has been under consideration for some time. Regulations have now been published dealing with the matter. The substances which are regarded as preservatives are formic aldehyde, boric acid, hydrofluoric acid, sulphurous acid, benzoic acid, and salicylic acid. This list will be added to from time to time. Four of these substances which may be used are given and the proportions in excess of which they may not be used are fixed. The proportion is per pint of liquid or per pound of solid food and the quantity is as follows: sulphurous acid, 1¾ g [illegible] a [illegible] r [illegible] and its products, canned and bottled foods, fruits and their products (such as jams, &c.), temperance drinks, fresh fish, pickles, and condiments. It may be mixed in the specified proportion or less with beer in all forms and with flesh foods in general. In a similar way the regulation deals with salicylic acid and with benzoic acid, but the list of excepted foods with which these bodies may not be mixed is more comprehensive. They are forbidden in all the articles mentioned, also in preserved fish, all flesh foods, and in beer, cider, and perry as well. Boric acid is forbidden in milk and in cream intended for use as such, but no reference is made in regard to its use in milk and cream in course of manufacture into butter, and it is permitted in bacon and ham and in preserved fish. Boric acid in butter is allowed in proportions not exceeding 35 grains per pound.

Hospital Affairs.

The annual report of the Children's Hospital, Sydney, presented to the twenty- [illegible] stated that 560 patients [illegible] general hospital and the [illegible] previous year. Of these 394 were discharged cured, 70 were relieved, 35 were unrelieved, and 63 died. There were 177 admitted to the diphtheria hospital and of them 143 were cured and 23 died. The out-patients numbered 3525, whose attendances were 15,638. Compared with the previous year there was an increase of 68 patients treated in the general hospital. The death-rate was 10·4 per cent., as against 11·1 per cent. last year. In the diphtheria branch there was a decrease of 14, while the death-rate was 12·02 per cent., as against 18·8 per cent. in the previous year.—Under instructions from the Victorian Under Treasurer an important circular has been issued to the committees of hospitals throughout the State, pointing out that the only persons eligible for treatment in hospitals subsidised by the State are:—1. Those who are entirely destitute. 2. Those who are unable to pay the ordinary medical fees but who are in a position to contribute towards their maintenance while in the institution. 3. Accident cases, which are always admissible. Under the provisions of the ticket, therefore, no person (except in cases of accident) who is not in a position to sign one or other of the declarations to the ticket must be admitted for treatment. Under the prescribed ticket the committee of management or some officer deputed by it for the purpose is required to examine the circumstances of each applicant for admission and, where necessary, to fix the amount of contribution. For the general guidance of the committee of management it is laid down that where it is found that the circumstances of an applicant under the declaration of "ability to contribute" warrant a contribution of more than £1 per week being imposed, special inquiries as to whether such applicant is a suitable object for charity should be instituted and precautions taken that no one who can pay the ordinary medical fees shall be admitted for treatment.—During a terrific storm at Townsville, Queensland, the hospital was seriously wrecked. Mr. W. R. Bacot succeeded in removing most of the patients, but five were killed and three persons were seriously injured, including a nurse.

Unregistered Practitioner Fined.

At the Newtown police-court A. M. Keighley was charged with using words implying that he was a legally qualified medical practitioner. The defendant stated that he held a diploma (produced) from the College of Ohio which entitled him to practise in any part of America. In September, 1899, at the court of quarter sessions at Newcastle he was called as an expert medical witness on behalf of the Crown. He had seen the diploma of Charles Ebden Crommelin referred to in a copy of the Register. It was issued by the same College. Defendant said he went through the Cincinnati

College of Medicine for a regular course and was duly examined and upon that examination he got the diploma. He was gazetted in the *Cincinnati Times*. Previously to that he studied for nine months at the London Hospital School of Medicine and was for 15 months at the Hospice du Sacré Cœur in France and was also for 12 months in a hospital at Bombay. He served six and a half years in broken periods in the study of medicine before receiving the diploma. On Jan. 11th, 1901, he was charged at the Lambton police-court with a breach of the Medical Practitioners Act and was fined £50, but it was afterwards reduced to £10. He had made applications for registration in 1901 and 1902 which were refused. Having given some details of his medical studies the defendant said that at the second trial at Maitland in 1901 he produced the diploma and the jury acquitted him. In reply to the bench he said that the diploma was not in the same state now as when he received it. He had had it framed and the seals had been eaten by silver fish. There had been lettering on the seals. The magistrate was not satisfied that the defendant was entitled to be registered and inflicted a fine of £50 or in default four months' hard labour.

United Friendly Societies' Dispensary, Sydney.

The new buildings for the Sydney United Friendly Societies' Dispensary were officially opened by the Premier on March 11th. The building is of brick, three storeys high, and cost about £2000. Some time ago the societies were compelled by the rapid growth of the work to seek fresh quarters. Parliament voted £1000 to assist in the purchase of a site and the societies interested took up debentures for nearly the whole of the balance, the institute paying interest at the rate of 6 per cent. There are branches of the institution at Woollahra and Redfern. As showing the work done it may be mentioned that there are 110 lodges interested in the institute, which dispenses for 9450 members and their wives and families, and that often 500 prescriptions are dispensed in one day.

Action against a Medical Man; alleged Negligence.

An action was brought against Dr. L. G. Davidson of Balmain in the Sydney District Court on March 24th. Damages were laid at £100. The plaintiff, an old lady who had a wound on the side of her head, complained that she had been improperly treated by medicines containing mercury. The jury returned a verdict in favour of the defendant.

April 11th.

Medical News.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the necessary examinations and conformed to the by-laws have been admitted Members of the College:—

Edgar William Allin, M.D., C.M. Trinity, Toronto, Trinity Medical College, Toronto; John James Armitage, St. Thomas's Hospital; George Ernest Aubrey and Thomas Paul Baldwin, St. Bartholomew's Hospital; James Hamilton Hall Baillie, M.B., Ch.B., B.Sc., New Zealand, Otago University, and University College Hospital; William Bain, Middlesex Hospital; Henry Edgar Barnes, St. Mary's Hospital; Matthew Robert Blake, M.D., C.M. Trinity, Toronto, Trinity Medical College, Toronto; James Landells Blakie, Otago University and Middlesex Hospital; Hugh Frank Bodvel-Roberts, M.A. Camb., L.S.A. Lond., Cambridge University and St. Bartholomew's Hospital; Lawrence Twemlow Booth, University College and Royal Infirmary, Liverpool; William Braddock, L.D.S. Eng., Owens College and Royal Infirmary, Manchester; John Dell Bridger, Guy's Hospital; Guy Leslie Buckeridge, Oxford University and Guy's Hospital; Richard Burges, Harold Lynch Burgess, and Hugh Rose Cran, London Hospital; Dudley William Carmalt-Jones, B.A. Oxon., Oxford University and St. Mary's Hospital; William Brown Clark, King's College Hospital; Arthur Frederick Cole and George Rowland Henderson Crozier, St. Mary's Hospital; Clement Harlow Cox, Universi[illegible] [illegible]lliam Bayly Crowfoot, B.A. Camb., Cambrid[illegible] Bartholomew's Hospital; Sydney Nelson [illegible] Hospital; Charles Henry Dawe and John Freeman Douse, Guy's Hospital; Charles Frederick Day, Charing Cross Hospital; William Frank Lydstone Day, B.A. Camb., Cambridge [illegible] Hospital; Oscar Chipman Dorman, [illegible] ity College, Dalhousie, and Middlesex [illegible] De Souza, B.Sc Lond., and Frank Rowe Edmonds, University College Hospital; Ernest Alfred Ellis, B.A. Camb., Cambridge University and London Hospital; Rowly Steavens Wykeham FitzHenry and Peter Gifford Foulkes, Middlesex Hospital; Henry Harper Formby, M.B., B.S. Melb., Adelaide and Melbourne Universities and London Hospital; John William Fox, Sheffield Medical School and London Hospital; William Edmund Gibson, M.B., Ch.B. New Zealand, Otago University and University College Hospital; Ellis Gordon Goldie and Herbert Myer Goldstein, Guy's Hospital; John Leopold Goldstein and Edward Michael William Hearn, London Hospital; William Haywood Hamilton, Reginald Janson Hanbury, and William Charles Frederick Harland, St. Bartholomew's Hospital; Horace Guy Lankester Haynes, Cambridge University and Westminster Hospital; James Willie Heslop, M.B., B.S. Durh., Durham University; James Howard, Owens [illegible] [illegible]rmary, Manchester; Bernard Hudson, M.A. C[illegible] niversity and St. Bartholomew's Hospita[illegible], Sheffield Medical School and St. Thomas's Hospital; Charles Wilmot Wanklyn James, General [illegible] St. Mary's Hospital; Henry Walter James, [illegible] ardiff, and St. Bartholomew's Hospital; [illegible], London Hospital; Smeeton Johnson and Seymour Whitworth Jones, St. Mary's Hospital; Hector Jones, University College, Cardiff, and St. Mary's Hospital; Charles Russell Keed, Henry Arthur Kellond-Knight, and Charles Samuel Kingston, St. Bartholomew's Hospital; Francis Seymour Kidd, B.A. Camb., Cambridge University and London Hospital; Charles James Izzard Krumbholz, M.B. Lond., University College Hospital; Cecil Lionel Lakin, Charing Cross Hospital; Percival Wilson Leathart, B.A. Camb., Cambridge University and St. Bartholomew's Hospital; Austin Clement Le Rossignol, B.A. Oxon., Oxford University and London Hospital; Eric Craigie Lindsey and Hugh Marcus Major, St. Mary's Hospital; Harry Bertram McCaskie, B.A. Camb., Cambridge University and St. George's Hospital; John Crichton Stuart McDouall, Otago University and University College Hospital; Stuart Donald Mackenzie, M.D., C.M. McGill, McGill College, Montreal; Harold Charles Cory Mann and Gordon Moir, Guy's Hospital; Edward Henry Milner-Moore, St. Mary's Hospital; Harold Joseph Moon, Owens College and Royal Infirmary, Manchester; Clifford Arthur Moore, General Infirmary, Bristol; James Cecil Mottram, University College Hospital; Percy Knowles Muspratt, Cambridge University and London Hospital; Clive Newland, M.B., B.S. Adelaide, Adelaide University and London Hospital; Wilfred Cowan Nimmo, Westminster Hospital; John Howard Le Bouverie Page, St. Mary's Hospital; Philip Noel Panton, B.A. Camb., and Henry Irving Pinches, B.A. Camb., Cambridge University and St. Thomas's Hospital; Frederick Samuel Pope, M.D. Toronto, Trinity Medical College, Toronto, and University College Hospital; Frank Gray Quinby, L.D.S. Eng., University College, Liverpool; John Douglas Pearson, Walter Woolfe Read, Ernest Roberts, and Frederic[illegible] Hospital; Bakhshi Isaac Raham, King's [illegible] spital; Harold Rischbieth, M.A. Camb., [illegible] and London Hospital; Harold Joseph [illegible] Cambridge University and St. Thomas's Hospital; Charles Russ, St. Mary's Hospital; John Noel Sergeant and Frederick William Weeks Smith, St. Thomas's Hospital; Hugh Hamilton Serpell, St. Bartholomew's Hospital; Charles Robert Shattock, L.D.S. Eng., King's College and Guy's Hospital; John Godfrey Slade, M.A. Camb., Cambridge University and St. Bartholomew's Hospital; William Clayton Smales, King's College Hospital; Malcolm William Stewart Smith, University College Hospital; Charles Sigismund Stolterfoth, University College and Royal Infirmary, Liverpool; Francis Talbot, Charing Cross Hospital; Harold Theodore Thompson, M.A. Camb., B.Sc. Lond., Cambridge University and London Hospital; Hugh Watts, St. George's and Guy's Hospitals; Ernest Weatherhead, Cambridge University and London Hospital; Bernard Harry Wedd and Harold Charles Winckworth, Guy's Hospital; Edmund George Harrison Weir, M.D., C.M. Toronto, Trinity Medical College, Toronto, and Middlesex Hospital; George Sydney Welham, Charing-Cross Hospital; Edward Aubrey Guy Wilkinson, B.A. Oxon., Oxford University and St. George's Hospital; Frederick Whitaker, B.A. Camb., and Henry Lydiard Wilson, B.A. Camb., Cambridge University and St. Bartholomew's Hospital.

UNIVERSITY OF CAMBRIDGE.—The following medical and surgical degrees were conferred on May 14th:—

Doctor of Medicine.—D. G. Hall, Emmanuel.

Bachelor of Medicine.—W. D. Chapman, Corpus; and A. E. Hodder, King's.

Bachelor of Surgery.—W. D. Chapman, Corpus; T. Guthrie and G. R. Rickett, King's; F. W. Goyder, St. John's; W. T. Scott, Clare; H. Ackroyd, Gonville and Caius; G. A. Wright, Christ's; J. M. Stenhouse, Sidney-Sussex; and E. A. Ellis, Downing.

The last stone of the new Humphry Museum has just been laid and the Downing-street portion of the new medical school building is ready to receive its fittings. For these a sum of some £8000 is still required. It is hoped that the laboratories and lecture-rooms will be ready for occupation during the summer.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following candidates have passed the Primary part of the examination for the Licence in Dental Surgery of the College:—

T. Flanagan, H. D. Griffith, J. W. Harvey, and W. Ogilvy.

UNIVERSITY OF DUBLIN: TRINITY COLLEGE.—At examinations held at Trinity term the following candidates were successful:—

Previous Medical Examination: Anatomy and Institutes of Medicine.—William F. Samuels, Charles E. C. Williams, and Henry H. White.

Physics and Chemistry.—Thomas Creaser and William J. Thompson.

Botany and Zoology.—Maurice Fitz Gibbon, Herbert Wright, Thomas W. E. Henry, John W. Lane, William J. Thompson, Charles B. Jones, and Cecil R. W. Stoney.

FOREIGN UNIVERSITY INTELLIGENCE —*Berlin.* Dr Paul Lazarus has been recognised as *privat docent* of Medicine and Dr Kurt Stranch as *privat docent* of Forensic Medicine —*Bonn* Dr Rosemann of Greifswald has been appointed to the Physiological Institute to replace Dr Bleibtreu who goes to Greifswald —*Budapest* Dr Michael Mohr has been recognised as *privat docent* of Pediatry —*Cadiz* Dr Leonardo Rodrigo Lavin has been appointed Professor of Physiology —*Gratz* Dr Theodor Muller has been recognised as *privat docent* of Hygiene —*Leipsic* Dr von Criegern has been recognised as *privat docent* of Medicine —*Malta* Dr Carmelo Mifsud has been appointed Professor of Medicine in succession to Dr Galea who has resigned —*Vienna* During the building of the new hygiene institute the lectures are being delivered by Dr Schattenfroh, extraordinary professor It is expected that Professor Flugge of Breslau will be appointed to the chair of Hygiene when the institute is finished, which will not be until next year —*Wurzburg* Dr Johannes Sobotta *privat docent* of Anatomy, and Dr Johannes Muller, *privat docent* of Medicine, have been promoted to Extraordinary Professorships

THE MEDICAL GOLF TOURNAMENT —The annual medical golf tournament will be held on Thursday, May 28th, on the links of the Hanger Hill Golf Club at Ealing by kind permission of the committee of that club The tournament will be under the same rules as last year—viz, 18 holes, match play, *v* Bogey in the usual two handicap classes, (1) 12 and under, (2) over 12 Members of the Hanger Hill Golf Club will deduct two from their handicap and no match can start after 3 P M There will be a foursome sweepstake *v* Bogey in the afternoon Players arrange their own matches or can apply for a partner to the honorary secretary Entries, stating lowest handicap and inclosing 5*s* entrance fee, to be made by May 26th to the honorary secretary, Mr Rolf Creasy, Windlesham, Surrey

UNIVERSITY COLLEGE, LONDON —At the session of the council of University College on May 4th the Liston gold medal for clinical surgery was awarded to Mr G E O Williams Mr Bilton Pollard was appointed additional examiner for the Atkinson Morley scholarship Dr W H Corfield was appointed a delegate to represent University College at the Liverpool Congress of Public Health In consequence of ill health Dr G V Poore has found it necessary to resign his chair of Medicine and Clinical Medicine and his physicianship to University College Hospital The council in accepting the resignation, unanimously adopted a resolution testifying to its high appreciation of the services which Dr Poore had rendered to the college and hospital during the past 35 years and especially expressing its great obligation to him for the active part which he took in bringing about the rebuilding of the hospital and in preparing the design for the new building

ASYLUM WORKERS' ASSOCIATION —At the annual meeting of this association held on May 14th at 11, Chandos street London, W, Sir James Crichton Browne the President, being in the chair, the report for the year 1902 was presented by the honorary secretary (Dr G E Shuttleworth) and its adoption was moved by the chairman in an interesting address He stated that the association had increased its membership to 4902 and he trusted that 5000 might henceforth be regarded as its minimum strength With reference to lunacy legislation the executive committee had urged on the powers that be the claim of the public asylum service to adequate and assured pensions, not only in the interests of officials but of the patients themselves whose welfare very largely depended upon the efficiency and stability of the service The "Homes of Rest' fund had done good work in helping sick and weary workers to recuperate, and the institution of prizes for the study of standard works of fiction (in which Mr Rider Haggard had kindly promised personal support) helped to create interests outside their sometimes depressing duties Medals had been granted for long and meritorious service in asylum nursing and this year the two gold medals (for more than 35 years' service) had been awarded to Mr C H Marshall of the Eastern Counties Asylum and Miss M A. Buckle of the East Sussex Asylum and the two silver medals (for more than 30 years service) to Mr J Lynch of the Cork District Asylum and Miss A E Jackson of Bethlem Royal Hospital A memorial brass had been provided for Colney Hatch Asylum to commemorate the heroic conduct of the staff on the occasion of the recent calamitous fire

VACCINATION GRANT —Mr George Fisher, M R C S Eng, who has received the vaccination grant for the fourteenth consecutive time in the No 6 "Albury District of the Guildford Union," was appointed public vaccinator on April 11th, 1874

MEDICAL HIGH CONSTABLE —Mr Cornelius Biddle, L R C P. Lond, M R C S Eng, at the unanimous request of the Merthyr Tydvil bench of magistrates, has decided to hold the office of high constable for Caerphilly Higher for another year

"The Londoners" Amateur Operatic and Dramatic Society, of which Sir Frederick Bridge, M V O, is President, will give four performances of the successful musical comedy *Florodora* at the Great Queen street Theatre, London, W C (by kind permission of Mr W S Penley), on Thursday and Friday, May 28th and 29th, at 8 P M, and on Saturday, May 30th, at 2.30 P M and 8 P M, in aid of Pearson's Fresh Air Fund The honorary acting and business manager is Mr Townley Searle who writes from the theatre and from whom tickets may be obtained He states that there are no expenses of management and that every penny is spent on the children

THE LONDON HOSPITAL QUINQUENNIAL APPEAL —At a meeting held at the Poplar Town Hall, under the presidency of the Mayor of Poplar, on May 14th, in support of the London Hospital Quinquennial Appeal, the Hon Sydney Holland in the course of an address, said that it required £300 a day to carry on the work of the London Hospital. It was sad, he said, to contemplate that the working classes of London displayed a great want of interest in hospitals and contributed to hospital charities less than did the workmen of any other town If such an institution as the London Hospital failed it would be difficult to estimate the resulting misery

Parliamentary Intelligence.

HOUSE OF COMMONS

THURSDAY, MAY 14TH

Escape from a Small pox Hospital

Mr WEIR asked the President of the Local Government Board if he would state in what circumstances a man named Costello of Latimer street Liverpool, recently escaped from Fazakerley Small pox [illegible] to the grounds of the hospital [illegible] not propose to take any steps in the matter

Overcrowding in Liverpool

Mr WEIR [illegible] whether he was [illegible] Liverpool 11 [illegible] overcrowded [illegible] were visited [illegible] former house [illegible] number while at the latter [illegible] that the houses are the property of the corporation of Liverpool whether [illegible] registered for the accommodation of emigrants None of these are in the possession of the corporation It is stated that the houses are of a high class of respectability and that the emigrants using them are chiefly Scandinavians who are cleanly and well-conducted people The houses are stated to be kept scrupulously clean They are under the supervision of the corporation and are visited daily and frequently by night also The unexpected arrival of a large body of emigrants on March 24th resulted in an excessive number being received in Nos 11 and 12. Proceedings were taken by the corporation in respect of the overcrowding thus caused and a fine was imposed in each case As regards small pox I am assured that the disease is very rarely introduced into Liverpool by emigrants who as a rule are vaccinated before starting I am glad to add that the outbreak at Liverpool is stated to be subsiding a result which appears to be largely owing to the strenuous action taken by the corporation

Medical Officers of Militia and Volunteers

Major RASCH asked the Secretary of State for War if he would explain why those medical officers of the Militia and Volunteers whom the War Office had employed continuously for the last three years or more in lieu of Royal Army Medical Corps officers, and whose services it still found necessary, through the dearth of regular medical officers, to retain for the same duties, no longer receive the pay and allowances of their corresponding army rank but have been reduced to a salary of £270 per annum, a reduction in the case of a lieutenant of more than £50, and in that of a captain of nearly £100 per annum.—Mr. BRODRICK replied: These officers have been demobilised and are now employed as civil medical practitioners. They act as such entirely at their option and it is impossible to treat them differently from other civil medical practitioners.

MONDAY, MAY 18TH.

The Contamination of Oyster Beds.

Mr. SEYMOUR ORMSBY-GORE asked the President of the Board of Trade if in view of the cases of typhoid fever caused by oysters reared in insanitary beds, he would consider the advisability of appointing an inspector of oyster beds.—Mr. GERALD BALFOUR replied: The question of preventing the spread of typhoid fever is primarily one for the sanitary authorities, and I do not think that the appointment of a special inspector of oyster beds by the Board of Trade is necessary. I may, however, mention that the Board of Trade is considering with the Local Government Board whether in particular cases joint action might not be taken by the local sanitary and fishery authorities with a view of preventing the discharge of sewage in the neighbourhood of oyster beds, or where that is impossible of inducing the owners to move the oysters to another site.

Tampering with Whisky and Brandy.

Sir EDWARD STRACHEY asked the Chancellor of the Exchequer whether he was aware that German spirit made from potatoes and roots was imported into this country and sold as Scotch or Irish whisky and that under the existing methods of supervision any potable spirit, German or otherwise, could be made up and sold as genuine whisky; and that English spirit made largely from molasses was shipped from this country to France and returned and sold as brandy; and if so whether he would consider the advisability of appointing a committee of inquiry into the matter.—Mr. RITCHIE replied: I am aware that allegations in the sense indicated have been made, but I have no official knowledge that would enable me to confirm or to refute such allegations. The matter was very fully examined by the Select Committee of the House of Commons in 1890 and I doubt whether any advantage would result from a fresh inquiry.

Cost of Public Vaccination.

Sir THOMAS ROE asked the President of the Local Government Board if he would cause a return to be issued showing the total cost of public vaccination charged on the poor-rate for England and Wales for the two periods of four years—viz., 1895 to 1898 and 1899 to 1902.—Mr. LONG replied: The particulars referred to are shown in Part I. of the Local Taxation Returns which are published annually. The returns for the year ended Lady Day, 1902, are in preparation, and Part I. will, I hope, shortly be ready for issue. It does not seem necessary that a special return should be granted.

Scarlet Fever at the Duke of York's School.

Mr. THOMSON asked the Secretary of State for War whether, in view of the fact that the epidemic of scarlet fever at the Duke of York's School still continued and that the sanitary authority of the borough of Chelsea, although it had been called upon to remove and to disinfect bedding and clothes, had been refused information on the extent of the epidemic and not allowed to enter the school, he would instruct the officials of the school to give entrance to the representatives of the sanitary authority of the borough.—Mr. BRODRICK replied: Nothing is known of any such refusal to give information to the sanitary authorities of the borough. On the contrary the medical officer of the school has been working in cooperation with the borough medical officer of health. It has been decided to remove all the boys who are free from infection and to encamp them for a time.

WEDNESDAY, MAY 20TH.

Infectious Hospital in Conway.

Mr. HERBERT ROBERTS asked the President of the Local Government Board whether his attention had been called to the proposed erection by the Conway rural district council of an infectious diseases hospital on a site abutting on the main road from Llandudno and Colwyn Bay up the Vale of Conway to Llanrwst; and whether, in view of the traffic along the road in question and having regard to public safety, the Local Government Board would take steps to induce the Conway guardians to adopt a more suitable site.—Mr. GRANT LAWSON, who replied, said: I have made some inquiry on this subject and I am informed that the rural district council proposes to erect an infectious hospital at Glan Conway. It is stated that the site, which has been approved by the medical officer of health, is as near the centre of the district as possible and that it would not involve any patient being taken through any town or populous part in going to the hospital. I am also informed that the main road referred to in the question has less traffic than the other main roads in the district. It is further stated that there are no farms or dwelling houses in close proximity to the site and that the hospital would not in any way be detrimental to the interests of the district. It does not appear whether it is intended to borrow money in connexion with the proposed hospital but if it is my sanction will be necessary and before giving it I should cause a local inquiry to be held.

BOOKS, ETC., RECEIVED.

ARNOLD, EDWARD, 37, Bedford-street, W.C.

A Class-book of Botany. By G. P. Mudge, A.R.C.Sc. Lond., F.Z.S., Lecturer on Botany and Zoology at the London School of Medicine for Women (University of London), W.C., and Arthur J. Maslen, F.L.S., Lecturer on Botany at the Woolwich Polytechnic. Price 7*s.* 6*d.*

CHURCH AGENCY, LIMITED, 33, Strand, W.C.

The Ecclesiastical Supplement to the "Premier" Telegraphic Code. Price 25*s.* net.

DUCKWORTH AND CO., 3, Henrietta-street, Covent-garden, W.C.

A Text-book of Plant Diseases caused by Cryptogamic Parasites. By George Massee, F.L.S., Principal Assistant (Cryptogams), Royal Herbarium, Kew. Second edition. Price 5*s.* net.

FISCHER, GUSTAV, Jena.

Lehrbuch der Klinischen Hydrotherapie fur Studierende und Aerzte. Von Dr. Max Matthes, a. o. Professor und Direktor der Medizinischen Poliklinik an der Universitat Jena. Mit Beiträgen von Stabsarzt Dr. Paul Cammert, Prof. Dr. Ernst Hertel, und Prof. Dr. Felix Skutsch. Price, paper M.8; bound M 9.

GLAISHER, HENRY J., 57, Wigmore-street, W.

Preparations for Operations in Private Houses. (Written for the Nurses' Coöperation) By Cuthbert S. Wallace, M.B., B.S. Lond., F.R.C.S. Eng., Assistant Surgeon to St. Thomas's Hospital and to the East London Hospital for Children. Price 1*s.* net.

G. P. PUTNAM'S SONS, 24, Bedford-street, W.C.

Short Talks with Young Mothers on the Management of Infants and Young Children. By Charles Gilmore Kerley, M.D., Lecturer on Diseases of Children, New York Polyclinic Medical School and Hospital. Price 5*s.*

HARTUNG UND SOHN, Leipzig.

Operationsubungen an der Leiche. Ein Leitfaden fur Studierende. Von Dr. Erich Bennecke, a. o. Professor, Leiter der Chirurgischen Universitäts-Poliklinik in der Kgl. Charité zu Berlin. Mit einem Vorwort von Prof. Dr. F. König, Geh. Med.-Rat. Price M.4.

Die Krankheiten der Speiseröhre. Von Dr. med. Fr. Schilling, Spezialarzt für Verdauungs- und Stoffwechsel-Krankheiten zu Leipzig. Price M.1.80.

HIRSCHWALD, AUGUST, Unter den Linden, 68, Berlin, N.W.

Die Traumatische Spätapoplexie. Von Prof. Dr. Rob. Langerhans (Berlin). Price M 2.

Ueber die Ursachen, das Wesen und die Behandlung des Klumpfusses. Von Dr. Julius Wolff, weil. Geh. Medicinalrath, a.o. Professor der Chirurgie und Director der Konigl. Universitats-Poliklinik fur orthopädische Chirurgie zu Berlin. Herausgegeben von Professor Dr. Georg Joachimsthal. Price M.4.

Lehrbuch der Allgemeinen Pathologie und Therapie innerer Krankheiten. Von Prof. Dr. Adolf Schmidt, Oberarzt am Stadt-kankenhause Friedrichstadt zu Dresden. Price M.10

JACK, T. C. and E. C., 34, Henrietta-street, W.C., and Edinburgh.

The Art of Cooking for Invalids in the Home and the Hospital. By Florence B. Jack. Third edition, revised and enlarged. Price not stated.

Breakfast and Savoury Dishes. By Florence B. Jack. Price 1*s.*

Hot Puddings, Souillés, and Fritters. By Florence B. Jack. Price 1*s.*

J. L. MURPHY PUBLISHING CO., Trenton, N.J., U.S.A.

Twenth-sixth Annual Report of the Board of Health of the State of New Jersey, 1902. Price not stated.

KIMPTON, HENRY, 13, Furnival-street, Holborn, E.C.

A Treatise on Diseases of the Eye, Nose, Throat, and Ear. For Students and Practitioners. By Various Authors. Edited by William C[illegible] P[illegible], A.B., M.D., Professor of Ophthalmology in the P[illegible] and Jonathan Wright, M.D., Attending Laryngologist to King's County Hospital. Two Vols. Price 32*s.* net.

The Diseases of Infancy and Childhood. Designed for the Use of Students and Practitioners of Medicine. By Henry Koplik, M.D., Attending Physician to the Mount Sinai Hospital. Price 21*s.* net.

The Diseases of the Nose, Throat, and Ear. By Charles Prevost Grayson, A.M., M.D., Lecturer on Laryngology and Rhinology in the Medical Department of the University of Pennsylvania. Price 18*s.* net.

Anatomy. A Manual for St[illegible] By William H. Rockwell, jr., M.D., [illegible] of Anatomy in the College [illegible] University, New York. Se[illegible] Demonstrator of Anatomy [illegible] of Physicians and Surgeons, Columbia University, New York. Price 10*s.* net.

LEWIS, H. K., 136, Gower-street, W.C.

Practical Pharmacy and Prescribing for Students of Medicine, being the Course in Use at St. Bartholomew's Hospital. By James Calvert, B.A., B.Sc., M.D. Lond., F.R.C.P., Lecturer on Materia Medica, Pharmacology, and Therapeutics to St. Bartholomew's Hospital. Second edition. Price 4*s.* 6*d.*

Public Health Laboratory Work. By Henry R. Kenwood, M.B., D.P.H., F.C.S. Part VII., dealing with Public Health Bacteriological Work, contributed by W. G. Savage, M.D., B.Sc., D.P.H., Medical Officer of Health, Colchester. Third edition. Price 10*s.* 6*d.*

LIBRAIRE MALOINE, 23-25, Rue de l'Ecole-de-Médecine, Paris.

Annuaire des Eaux Minérales, Stations Climatiques et Sanatoriums de la France et de l'Etranger. 1903. Par le Docteur H. Morice, Redacteur en Chef de la Gazette des Eaux. Price 1 fr. 50.

MACMILLAN AND CO., LIMITED, London.

Handbook of Climatology. By Dr. Julius Hann, Professor of Cosmical Physics in the University of Vienna and Editor of the *Meteorologische Zeitschrift.* Part I. General Climatology. Translated by Robert de Courcy Ward, Assistant Professor of Climatology in Harvard University. Price 12*s.* 6*d.* net.

SAMPSON LOW, MARSTON AND CO., LIMITED, St. Dunstan's House, Fetter-lane, E.C.

A Complete System of Nursing. Written by Medical Men and Nurses. Edited by Honnor Morten, L.O.S. Diploma. Second edition. Price 7*s.* 6*d.* net.

VIGOT FRÈRES, 23, Place de l'École-de-Médecine, Paris.

Technique et Indications des Médications Usuelles. Par G. Lemoine, Professeur de Clinique Médicale à la Faculté de Lille. Price 7 fr.

Le Massage Abdominal. Par le Docteur de Frumerie, de la Faculté de Médecine de Paris. Préface de M. le Professeur Gilbert. Price 2 fr.

WRIGHT, J., AND CO., Bristol.

[illegible] atment. [illegible] Third [illegible] r inter- [illegible]

WYNKOOP HALLENBECK CRAWFORD CO., of Lansing, Mich. (State *Printers*).

[illegible] Secretary of State on the [illegible] n Michigan for the year 1900. [illegible] Edited by Cressy L. Wilbur, [illegible] Statistics.

Appointments.

Succe[illegible] ublic Institutions, [illegible] this column, are [illegible] ected to the Sub- [illegible] morning of each [illegible]

[illegible] been appointed House [illegible]

[illegible] B Ch. Oxon., has been [illegible] aunton and Somerset [illegible]

BEVILLE, F. W., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Denham District of the county of Buckingham, and also for the Uxbridge [illegible] Urban District.

HA[illegible] D.P.H. Cantab., [illegible] Dartmouth and [illegible]

LE[illegible] appointed Junior [illegible] appointed House Accoucheur at King's College Hospital.

WADE, NOEL NATHANIEL, M.B., Ch.B. Edin., has been appointed Assistant House Surgeon to the Cardiff Infirmary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BETHLEM HOSPITAL.—Two Resident House Physicians (unmarried) for six months. Honorarium at rate of £25 each per quarter, with board and residence.

BRECON AND RADNOR ASYLUM, Talgarth, R.S.O. Assistant Medical Officer, unmarried. Salary £140 per annum, with apartments, [illegible] Queen's road.— [illegible] enewable. Salary [illegible] inn road, W.C.— [illegible], with board and [illegible]

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Junior House Surgeon, unmarried. Salary £80 per annum, with board, lodging and washing.

CHARING CROSS HOSPITAL.—Assistant Physician.

CHICHESTER INFIRMARY.—Honorary Medical Officer. Also Surgeon Dentist.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon. Salary £100, with board, residence and washing.

DEVONSHIRE HOSPITAL, Bu[illegible] Salary £100 per annum. Als[illegible] Both with apartments, [illegible]

EAST LONDON HOSPITAL FOR [illegible] Shadwell, E.—House [illegible] of £25, with board and residence. Also Resident Medical Officer. Salary £100 per annum, with board, residence, and washing.

EAST SUSSEX COUNTY ASYLUM, Hellingly.—Second Assistant Medical [illegible] a year, with board, lodging, [illegible] Salary £100 per annum, with [illegible] nd Public Vaccinator. Salary [illegible]

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—House Surgeon, unmarried. Salary £75 per annum, with residence, [illegible] unior Assistant Medical [illegible] rd, lodging, and washing. [illegible] INSANE, Virginia Water, [illegible] Salary £175 per annum, [illegible]

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Physician, unmarried, for six months. Salary £20, with board and residence.

***HOSPITAL FOR WOMEN**, Soho-square, W.—House Physician for six* months; salary £30 for that period. Also Assistant Physician. Also Clinical Assistants.

INDIAN MEDICAL SERVICE, India Office, London, S.W.—Examination for not less than Sixteen Commissions in His Majesty's Indian Medical Service.

LIVERPOOL STANLE[illegible] Salary £100 per annum, wit[illegible]

LONDON HOSPITAL, [illegible]

MIDDLESEX HOSPIT[illegible] ies. Salary £500, ri[illegible] lar- [illegible] ical [illegible] with [illegible] ance, and washing. [illegible] Devon.—House Surgeon [illegible] both unmarried.

[illegible] ("DREADNOUGHT").—Senior House [illegible] Salary £100 per annum, with board and [illegible]

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon for six months, renewable. Salary at rate of £50 per annum, with board and residence.

SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon, unmarried, for six months, renewable. Salary at rate of £70 per annum, with residence, board, and washing.

SWANSEA GENERAL AND EYE HOSPITAL.—Two Resident Medical Officers. Salary £75 each, with board, apartments, washing, and attendance.

UNIVERSITY [illegible] Degrees in Arts, Science, [illegible] Zoology. Salary £50 per a[illegible]

WESTERN G[illegible] N.W.—Honorary Physician or Surgeon-Accoucheur.

WEST LONDON HOSPITAL, Hammersmith road, W.—House Physician and House Surgeon, both for six months. Board and lodging provided.

YORK COUNTY HOSPITAL.—House Physician. Salary £100 per annum, with board, residence, and washing.

Births, Marriages, and Deaths.

BIRTHS.

ANDREWS.—On May 15th, at Tonbridge, Kent, the wife of H. A. Andrews, M.R.C.S., of a daughter.

CARRUTHERS.—On May 13th, the wife of S. W. Carruthers, M.D. Edin., of a daughter.

CAZALET.—On May 17th, at Sutton, Surrey, the wife of Grenville William Cazalet, L.R.C.P. Lond., M.R.C.S., of a son.

FINLEY.—On May 12th, at West Malvern, the wife of Harry Finley, M.D. Lond., of a son.

GLOVER.—On May 14th, at 17, Belsize park, N.W., the wife of Lewis G. Glover, M.D., of a daughter, who only survived her birth a short time.

DEATH.

SKINNER.—On May [illegible]th, at Dyne road, Brondesbury, N.W., David Shorter Skinner, M.D. Brux., Medical Officer of Health for Willesden, aged 67 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

FRIENDLY SOCIETIES AND THE MEDICAL AID QUESTION.

UNDER this heading we read an account in the *Heanor Observer* of May 15th of a meeting which recently took place at Heanor and which was addressed by a Mr. W. Turton. Mr. Turton's address was the usual kind of thing, urging upon the pious members of friendly societies the necessity of union lest the impious medical men should dare to form a union of their own. We only allude to a rather silly address because of the frank manner in which Mr. Turton states what he considers to be the proper relations between a medical man and his patients. The medical officer of a medical aid association "is allowed no private practice whatever and in cases of neglect complaint is made to the managing committee who deals with it in a much different manner than a complaint against your present lodge surgeon can be dealt with. In one case the medical officer is your servant. In the other case he is your master and you are only a small item in his practice." We trust that no medical man will place himself in the humiliating position which Mr. Turton thinks that he should occupy. We have always asserted that the desire of the medical aid associations was to have their medical attendant as their servant, to cut down his pay, to place him under the orders of a lay committee, and to dismiss him at will. We have read speeches in which this view was contradicted by supporters of the medical aid associations and in which the cordial relations that should exist between the associations and their medical men were much insisted upon. We never believed in these cordial relations nor does Mr. Turton.

RESTRICTION ON HOSPITAL RESIDENTS STARTING IN PRACTICE.

To the Editors of THE LANCET.

SIRS,—May I request readers of THE LANCET kindly to let me know the names of towns where hospital residents are appointed subject to the condition that they shall not start in practice before the lapse of a certain time? I believe that there are a good many. Letters addressed to me, care of THE LANCET, will be gratefully acknowledged by me.

I am, Sirs, yours faithfully,

May 20th, 1903. X. Y.

DISTINCTIVE MARKS FOR MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—Some time ago a suggestion was made that medical men should wear some distinguishing style of dress or badge to signify their public calling. As this has fallen flat, so far as I know, I beg to re-direct attention to the subject. In the interest of the public it is often important that a medical man should be recognised by strangers. To give an illustration. A short while since an accident occurred in one of the Midland towns. A crowd, of course, quickly gathered and amongst them an unostentatious but noted surgeon who, on seeing a well-dressed gentleman in a frock-coat and silk hat rush up and take charge of the injured man, withdrew, leaving the case—as he supposed—in the hands of a fellow medico. But it was not so. When the patient rallied the policeman tried to obtain a fee from the friends for the supposed medical man and was considerably taken aback on asking his name to receive the business card of a traveller for a commercial firm. The traveller told me that he felt in great trepidation as to the results of his treatment and the police and crowd were deceived in supposing that a responsible person had taken charge of the case.

I would suggest an enamelled badge bearing a cross, varied according to the branch of work of the wearer—e.g., a gold cross on a blue or red field for a consulting physician or surgeon and a white cross on a blue and red ground for a general practitioner, with a rose, thistle, or shamrock to designate the place of registration. I inclose some designs in explanation. I am, Sirs, yours faithfully,

May 16th, 1903. SIMPLEX.

*** Our correspondent incloses some designs, drawn on heraldic model, for badges to be worn presumably on the watch chain. The devices are ingenious, for anyone knowing the code could detect at a glance the exact degrees or diplomas of the badge-bearer.—ED. L.

SUTURE OF A WOUND OF THE HEART.

A RECENT number of the *Gazzetta degli Ospedali e delle Cliniche* contains an account of a successful case of suture of wound of the heart which was described by Dr. Isnardi at a meeting of the Royal Academy of Medicine of Turin held on Jan. 16th. The patient, a man, 26 years of age, was stabbed in the left side of the chest on Feb. 8th, 1902, and was carried to a hospital in an apparently dying state with the knife still in the wound. On resection of the fourth and fifth ribs the pericardium was found to be punctured and full of blood. The wound in the heart could not be seen on account of the profuse hæmorrhage, but Dr. Isnardi could feel it with his forefinger and under the guidance of this finger he passed a wire suture through its edges. The heart was then gently drawn forward by the free ends of the suture and the hæmorrhage was completely stopped by the application of three sutures. It could then be seen that the wound was in the wall of the right ventricle and was 0 6 inch in length. Empyema afterwards set in, due to the wounding of the left pleura in the course of the operation and another operation had to be performed on this account. For more than a month the heart could be seen beating, both it and the left pleural cavity being exposed. Daily dressings and gauze drainage were employed. The man recovered perfectly and he had been already for some months following his employment as a mason at the time of Dr. Isnardi's communication to the Academy.

A POINT IN THE WORKING OF THE VACCINATION ACT.

To the Editors of THE LANCET.

SIRS,—A curious piece of red tape has come into my experience in the working of the Vaccination Act. Ever since its introduction I have vaccinated all children voluntarily brought to the surgery and charged a fee of 2*s.* 6*d.* in each case. These fees have always been paid till now. Those charged in my last account have been struck out on the ground that I have no claim, but the fees for revaccination at the surgery are still allowed. I could have sent the children home, followed and vaccinated them, and charged a fee of 5*s.*, but this would seem to anyone too grasping and petty in a public officer.

As a sincere admirer of the new system, the working of which I have watched with great satisfaction, I am much exercised as to the reason of my having to forfeit these fees. Is it the intention of the Act to discourage all surgery vaccinations as tending to propagate infection? No other explanation occurs to me. I find that another officer of our board has had a similar experience.—I am, Sirs, yours faithfully,

May 12th, 1903. ASTONISHED VACCINATOR.

◆

M.R.C.S., L.R.C.P., L.S.A.—It is very advisable to make sure that the methods of vaccination adopted are efficient. If our correspondent is certain that he leaves nothing undone, either in the matter of lymph or in the matter of operation, he might complain to the Local Government Board.

A New Englander writes with the cocksureness of complete ignorance. Exhaustive experiments on the lower animals as well as the personal experiences of many observers have shown all theories with regard to the determination of sex of the kind that he would promulgate to be completely fallacious.

W. M.—The instrument in question has not been submitted to medical inspection. The claims made for it in the lay press are obviously ridiculous.

Enquirer should consult a solicitor and show to him copies of all the documents signed with reference to the engagement, especially the bond.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex ([illegible] M.), Chelsea (2 P.M.), Samaritan [illegible] 2 P.M.), Soho-square (2 P.M.), R[illegible] Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.) London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat Golden-square (9.30 A.M.), Soho-square (2 P.M.).

WEDNESDAY (27th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M).

THURSDAY (28th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat, (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (29th).—London [illegible] P.M.), St. [illegible] haring [illegible] Mary's [illegible]), Gt. [illegible] P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (30th)—Royal Free (9 A M) London (2 P M) Middlesex (1 30 P M) St Thomas's (2 P M) University College (9 15 A M) Charing Cross (2 P M) St. George's (1 P M) St Mary's (10 P M) Throat Golden square (9 30 A M) Guy's (1.30 P M)

At the Royal Eye Hospital (2 P M) the Royal London Ophthalmic (10 A M) the Royal Westminster Ophthalmic (1 30 P M) and the Central London Ophthalmic Hospitals operations are performed daily

SOCIETIES

MO [illegible]

EPIDEMIOLOGICAL SOCIETY (11 Chandos street, Cavendish-square W)—8 30 P M Mr Jonathan Hutchinson: The Etiology of Leprosy

WE[illegible] F GREAT BRITAIN [illegible] Annual General [illegible] (Ohio U S A)

LECTURES ADDRESSES DEMONSTRATIONS &c

MONDAY (25th)—MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22 Chenies street W C)—4 P M Dr A Whitfield: Clinique (Skin) 5 15 P M Dr G Newman Food Poisoning

POST GRADUATE COLLEGE (West London Hospital Hammersmith road W)—5 P M Dr Davis Diseases of the Kidney (continued)

TUESDAY (26th)—MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22, Chenies-street W C)—4 P M Dr R L Bowles: Clinique (Medical) 5 15 P M Dr W Bruce: Sciatica

POST GRADUATE COLLEGE (West London Hospital Hammersmith road W)—5 P M Mr C Williams: High Frequency Currents

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen [illegible]

[illegible] ST (Bromp[illegible] Intrathoracic [illegible]

[illegible] POLYCLINIC [illegible] Clinique [illegible] osis of Pulmonary Tuberculosis

POST GRADUATE COLLEGE (West London Hospital Hammersmith road W)—5 P M Mr Baldwin Treatment of some Injuries and Emergencies

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (7 Fitzroy square W)—4 P M Dr J F Little: The Prevention of Consumption (Post Graduate Course)

CHARING CROSS HOSPITAL —4 P M Dr Abercrombie Medical Cases (Post Graduate Course)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond street W C)—4 P M Dr Voelcker: Chorea

GUY'S HOSPITAL MEDICAL SCHOOL—UNIVERSITY OF LONDON (Physiological Theatre)—4 P M Dr F W Ainley Walker: The Experimental Pathology and Therapy of Typhoid Infection (Gordon Lecture)

FRIDAY (29th)—MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22 Chenies-street W C)—4 P M Dr J Horne Clinique (Throat) 5 15 P M Dr S Taylor: Parasites of the Gastro intestinal Canal

POST GRADUATE COLLEGE (West London Hospital Hammersmith road W)—5 P M Dr Beddard The Physiology and Pathology of the Ductless Glands

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street W)—9 P M H S H Albert Prince of Monaco The Progress of Oceanography

SATURDAY (30th)—ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle street W)—3 P M Prof S P Thompson The De Magnete and its Author (I The Book)

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(Taken daily at 8.30 a m by Steward's Instruments)

THE LANCET Office May 21st 1903

Date.	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rainfall.	Solar Radia in Vacuo.	Maximum Temp Shade.	Min. Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M
May 15	30 14	S W		99	61	52	51	[illegible]	Cloudy
" 16	30 20	S W		99	57	46	49	52	Cloudy
" 17	29 76	W	0·13	10[illegible]	66	47	46	4[illegible]	Cloudy
" 18	30·09	N	0·38	89	55	44	4[illegible]	4[illegible]	Overcast
" 19	30·02	S		111	63	45	47	52	Hazy
" 20	29 94	S W		102	67	52	63	5[illegible]	Overcast
" 21	30 16	W		117	70	50	52	5[illegible]	Fine

During the week marked copies of the following newspapers have been received *Boston Independent Highland News Westminster Gazette Hertfordshire Mercury Windsor and Eton Express* [illegible] *South Wales Daily News East Anglian Daily Times Walsall Advertiser Surrey Advertiser Coventry Herald Birmingham Daily Mail Reading Mercury Mining Journal Local Government Chronicle Bournemouth Visitor &c.*

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Clinical Remarks
ON
THE RESULTS OF OPERATIONS FOR STRANGULATED HERNIA.

Delivered at University College Hospital in March, 1902,

BY ARTHUR E. BARKER, F.R.C.S. ENG.,
PROFESSOR OF SURGERY AT UNIVERSITY COLLEGE AND SURGEON TO UNIVERSITY COLLEGE HOSPITAL.

GENTLEMEN,—You are aware that a very careful analysis with separate tables of all the cases admitted into the surgical wards of this hospital is made every year and printed as the "Report of the Surgical Registrar." Being anxious lately to inquire into some matters relating to the mortality from strangulated hernia I have carefully gone through the "Tables" devoted to this subject in the "Reports" for a number of consecutive years up to the end of 1901, collecting and tabulating all the recorded cases of this condition and the results of their treatment in various ways, Mr. W. B. L. Trotter and Mr. T. R. H. Bucknall having kindly furnished me with abstracts of their unpublished reports for the last two years just going to press.[1] The study of this series has been most interesting and instructive. Such [illegible] ses admitted into one [illegible] same conditions and [illegible] inciples offers the best [illegible] *procured. The theories* [illegible] meaning are, of course, a great help to us, but have to be checked by clinical experience lasting over years and gathered with the greatest approach to accuracy from large numbers of cases arranged in a methodical manner as these have been. Had the figures been greater it is possible that in some respects they would have been more instructive; but as it is 406 consecutive cases of strangulated hernia offer a good basis for study. I desire now to lay before you some of the facts and conclusions to be derived from this analysis, only adding that the "Reports" have been drawn up for a long series of years on a carefully thought out and pre-arranged plan by thoroughly competent officers as their special duty, which included a careful abstract of the post-mortem notes in the fatal cases.

The subject is a most important one, for every surgeon, wherever he is placed, is sure to come in contact frequently with such a complaint as hernia, a complaint which is hardly likely to diminish in frequency inasmuch as it depends in a great measure on anatomical defects in the abdominal wall which we cannot prevent in any known way though we may, and do, remedy them by radical cures. If the practice of performing these latter operations in early life becomes more general it may, of course, come to pass that strangulated hernia will decrease in frequency. But it is not impossible, on the other hand, that the condition may become more frequent as the stress and strain of life become more severe in our ever-increasingly crowded communities. Be that as it may, the number of cases operated on for strangulated hernia in this hospital has gone on steadily rising and for the last 10 years the average number has been just twice as great as 20 years ago. This is partly due to the fact which appears in our tables that reduction by taxis is now less frequently resorted to in severe cases than formerly but not entirely.

As to the diminution in the number of cases admitted into the wards for strangulation and there treated by taxis, it may be stated that in the first series of years taken 36 were so treated by taxis, in the second equal number of years 52, in the third only 19, in the fourth only six, and in the last none at all. Of course, other cases of hernia have been treated by taxis in the casualty department but I am referring now to the more severe cases admitted to the wards severity as its dangers are more fully recognised and more intelligent and common-sense measures are adopted to meet them at *an early moment. However, for the present it is* enough to say that this is a common and dangerous condition occurring in all classes and at all ages. As to the last point, a glance at our tables proves it completely; all ages are fully represented. That it is found among all classes every surgeon of experience knows well. And as to its dangers, we are left in no doubt when we take any long series of consecutive cases admitted for the condition into such an institution as this. Many have been relieved in the past, as we have seen, by taxis, but among such the mortality appears to have been high. In the first series of years in our tables in the cases *not* operated on but treated by taxis or other palliative measures in the wards the mortality was 13·8 per cent.; in the second equal series of years it was 13·4 per cent. Indeed, it has been so high (for the reason that the surgeon in doing taxis never knows the condition of the bowel he *is returning into the abdomen)* that some, myself among the number, doubt whether in any given case of strangulated hernia taxis ought ever to be employed *except in the very recent cases and among aged patients in a state of great weakness.* In this conclusion they are influenced in the first place by the acknowledged uncertainty as to the actual state of the bowel which is to be returned and in the second by the equally acknowledged safety nowadays of exposing the gut by opening the sac and examining it before replacing it And, moreover, the possibility of performing a radical cure in such cases as are quite safe to reduce tells in favour of operating in all cases without resorting to taxis except in those conditions occurring recently in very old people.

That it is difficult in many cases of strangulated hernia to determine what amount of damage may be recovered from is well known and is clear from our tables. Numbers of our cases in which at the operation the gut was put back in the belief or hope that it was sound or viable resulted in death from perforation or peritonitis without actual perforation. The same has been true of cases treated by taxis. In other words, the peritoneum has been infected by septic matter traversing the coats of the replaced bowel in a way that does not take place when the coats are sound. The actual duration of the strangulation has been shown to be an unsafe guide as regards the propriety of replacing the loop in the abdomen. Many of the cases in which it was comparatively short have succumbed to peritonitis after reduction while others have recovered when the strangulation has lasted for days One of the most striking cases illustrating this point was that of a recently strangulated femoral hernia in a healthy woman, 33 years of age. It had positively only been down for 18 hours. When I operated the gut looked somewhat suspicious, but I put it back and did a radical cure. Immediate recovery followed, the wound healing by first intention, and the patient left the hospital quite well on the sixteenth day But some weeks later acute obstruction came on and the result was nearly fatal. Again, some months later another similar, but more severe, attack took place I then opened the abdomen and found the knuckle of gut which had been strangled in the centre of a mass of adherent coils matted together. It was badly kinked just as when reduced four months before and was almost ulcerated through. I removed the whole mass of matted coils, equalling 37 inches of small intestine, united the afferent and efferent portion end to end and the patient recovered without a bad symptom. Here the first strangulation had certainly only existed for 18 hours, but I now see that the intestine ought not to have been put back at the time but should have been immediately resected. This is only one out of many cases pointing to the same conclusion.

But leaving quite apart the cases in which taxis has been applied, a glance at any long list of cases which have required operation still shows a very high rate of mortality. And this in spite of all our improvements in surgical theory and procedure. On this point I will ask you to look for a moment at the last consecutive 406 cases of strangulated hernia admitted to our wards up to the end of March, 1903, and there operated on. In the first place, the gross number of deaths (127) in the whole series amounts to 31·2 per cent. This is a very heavy mortality. But in order to see how far our improved methods and the fact that cases are now submitted to operation with less hesitation and therefore earlier than formerly have influenced the results as time went on. I have arranged the cases in equal series of so many years. You will see (Table I.) that in the first the mortality was 53 1 per cent., in the second 35·7 per cent., in the third 29·6 per cent., in the fourth 28·5 per cent., in the fifth 33·7 per cent., and in the sixth 25·0 per cent. From this it would appear that though there have been some improvement on the gross mortality (31·2 per cent.) during the last few years and a considerable gain as contrasting the last five completed years (22·2 per cent.) with the first (53·1 per cent.), still the mortality had remained almost stationary for several years before 1896—i.e., just 30·4 per cent. And yet this period corresponds with the Listerian method of wound treatment in its full if not its highest development which no doubt partly accounts for the improvement. But it may be asked, Are not the cases of strangulated hernia now brought to the hospital at an earlier stage of the complaint than formerly and therefore less liable to suffer from the risks of operation than in previous periods? This is to a certain extent doubtless true. But that they are not yet brought to us early enough is abundantly evident in three ways when we examine the records. In the first place, the number of cases in which the condition of the patient and bowel was so bad as to forbid anything more in the opinion of the surgeon than an artificial anus being made remains almost equal for each of the series of years and was exactly the same for the first and penultimate. I contrast the penultimate with the previous series because in the last years of all analysed enterectomy has begun to take the place of artificial anus. In the next place, since the year 1887, when the first primary enterectomy was done for this condition, the number of enterectomies for each year has remained practically the same until the last three Thirdly, a study of the post-mortem records in our series—i.e., those cases which have died after operation—shows the same dismal story of either perforation after reduction of the bowel or general peritonitis spreading from the reduced gut in nearly all the fatal cases right down to date. Excluding a few cases which died from shock and lung complications this has been the cause of death in the vast majority of the 30·4 per cent. of failures. I show you here an analysis of the causes of death in the cases dying after operation (Table II.). They amount to 127, of which in 13 the cause was not ascertained or given. Of the remaining 114 it will be seen that sloughing of the gut or peritonitis accounted for at least 55, and indeed that about 100 died from trouble depending upon the state of the bowel returned. In other words, if it had been possible to treat these cases without returning the gut there would probably have been a much lower death-rate.

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[1] Since these remarks were put together Mr. Trotter has further favoured me with the figures for 1902 and to the end of March, 1903, which have here been incorporated with the original tables.

TABLE I.—*Consecutive Series of Cases of Strangulated Hernia Operated on up to the End of 1901.*

First series of years, mortality	53·1 per cent.
Second " " "	35·7 "
Third " " "	29·6 "
Fourth " " "	28·5 "
Fifth " " "	33·7 "
Sixth " " "	25·0 "
406 cases, gross mortality	31·2 "
Last series	22·2 "

TABLE II.—*Causes of Death in cases Dying after Operation for Strangulation.*

Sepsis	2	Hæmorrhage	1
Sloughing	12	Obstruction	3
Peritonitis	43	Anæsthetic	2
Collapse...	17	Lung embolism	2
Asthenia	14		114
Lung troubles	16	Unascertained	13
Heart failure...	2	Total	127

This being so, it is only natural to inquire whether this high mortality of from 25 to 30 per cent. due to infection of the peritoneum from the returned gut, perforated or unperforated, could not be reduced in some way. Now it is perfectly plain that in the first place this ought to be done by abstaining from replacing the damaged gut within the abdomen in bad cases. This involves either the fixing and opening of the damaged bowel in a surface wound and the establishment of an artificial anus to be closed later if the patient survive or the immediate removal of the damaged loop and anastomosis of the ends thus left. But as to the first means of avoiding reduction of the damaged gut within the abdomen it will be seen from our tables that in only two cases in all these years was the formation of an artificial anus successful in averting death, although the character of the cases so treated had not materially altered and the procedures may be assumed to have somewhat improved. Very little then is to be hoped from this procedure unless performed at a much earlier date than hitherto. There remains, then, enterectomy; and by this I mean the primary removal of the damaged loop without the previous formation of an artificial anus. Can we expect to have better results from this procedure than from those in vogue hitherto? Now up to the summer of 1899 no single case of successful enterectomy for this condition, whether primary or secondary, appears in our records. Since then to the end of March, 1903, there have been three cases of artificial anus with two deaths and seven cases of primary enterectomy with four deaths.

This is an important improvement. For from our previous experience I think it may be assumed that every one of these patients recovering after enterectomy would have certainly died, whether the damaged bowel had been simply reduced or had been fixed in the wound and opened so as to form an artificial anus. As to the condition of the gut in each case we can speak with confidence. It was hopelessly damaged. To have put it back would have been to court disaster and to have formed an artificial anus would have almost as certainly led to the same result. There appears, therefore, to be good reason for hoping that in primary enterectomy in selected cases we may in the future have the means of reducing our mortality still further. Of course, cases will still be brought to us in too collapsed a condition to justify the hope that any long operation will save them. But from our records we can see that there are a large number of others admitted in very fair condition in whom after a very simple and rapid operation with reduction death has nevertheless followed from peritonitis with or without perforation, and it is among them that primary enterectomy will play a very beneficent rôle, I believe, in the future. Had it not been for the successful resections of gangrenous gut performed within the last four years the mortality would have been apparently 30 0 per cent. instead of 25·0 per cent. for the last quinquennium, or 24 0 per cent. for the last four years instead of 18·0 per cent. which was actually the case. We want further experience and a larger number of cases to speak positively, but this fact is significant.

But of course the whole question turns to a large extent upon our possessing or not an adequate mastery of the principles which underlie the excision of damaged intestine and confidence in any given case that this operation subjects the patient to a smaller risk than other procedures. For my own part I know of no operation which demands from the surgeon a wider knowledge of the newest pathological lore or a more patient and laborious inquiry into every detail in the methods of carrying it out. But we are improving in both directions and I feel sure that before long we shall attain to such a proficiency as very materially to influence the mortality in the conditions alluded to above and in those allied to them. And if there be any weight in all this reasoning, that in all the cases which die after operations for strangulated hernia more than half are lost because damaged bowel is put back into the abdomen which ought never to have been so reduced, it becomes our duty very carefully to study the principles which underlie the procedure of removing at once the gangrenous loop and also the many details which in the course of time have come to be considered indispensable. This is a very wide subject. It involves a study of the whole mechanism of strangulation of gut and then the relation of the latter to the secondary enteritis and peritonitis produced by it and the bacterial infection consequent on it. It also requires a careful consideration of the processes of repair in intestinal wounds. Finally, a survey of the mere mechanism of removal of the damaged coil and restoration of the continuity of its tube must be made minutely. All this takes us very far afield. The details which have been found necessary to insure success appear almost endless and yet they must be understood and mastered if we are to be successful. Now one of the most important steps we can take in such a study is to examine closely into the causes of death in those cases of enterectomy for one or other condition which have been unsuccessful in saving life, whether among our own or outside records. Here we shall find much to instruct us in the first place as to the selection of cases in which such a procedure is demanded and is not too late, next as to the length of the portion of intestine to be resected, and finally as to the conditions which must be observed in uniting the cut ends. This would, however, lead me too far to-day. I will only remark in conclusion that errors in technique are becoming rarer and, as was pointed out to me by our surgical registrar, the last unsuccessful cases of enterectomy show in the post-mortem records that death in each was due to causes quite independent of the details of the procedure and was really consequent on the general condition of the patient at the time of the operation. One was due to a band of old fibrous tissue which caused a second strangulation when the junction after resection had been made successfully.

A Clinical Lecture

ON

ACHOLIA.

Delivered at St. Mary's Hospital Medical School on May 7th, 1903,

BY W. B. CHEADLE, M.D. CANTAB., F.R.C.P.,

SENIOR PHYSICIAN TO ST. MARY'S HOSPITAL AND LECTURER ON CLINICAL MEDICINE AT THE MEDICAL SCHOOL; CONSULTING PHYSICIAN TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

GENTLEMEN,—An affection of the digestive tract which has received scanty consideration either from pathologists or clinical observers—although it has not passed altogether unnoticed—is that condition which I have ventured to term "acholia." In its minor degree it is by no means very uncommon; you may have seen a mild but not uncomplicated case of the kind in a child a few weeks ago in De Hirsch ward. In its more extreme and rarer forms it is a serious disorder and sometimes, although rarely, of fatal issue. I have seen one fatal case only.

Acholia is specially characterised, as the name implies, by the absence of bile in the stools—without jaundice or sign of obstruction to the biliary outflow from the ducts. This peculiar condition of the stools without jaundice has been noted by clinical observers in varying circumstances and in different disorders without in most cases any special appreciation of its pathological significance. One form of it in children has been described by that acute clinical observer, Dr. S. J. Gee, in 1888, under the name of cœliac disease[1] or belly affection, from κοιλία, the belly, in allusion to the flaccid distended abdomen and implication of the abdominal organs, and he gives an excellent clinical presentation of the disorder in all its symptoms, designating it as a form of chronic indigestion. Cases of the same nature have been recorded by Dr. R. A. Gibbons[2] in a thoughtful and suggestive article published in the *Edinburgh Medical Journal* 11 years later, in which he expresses the opinion that the source of trouble will be found in the liver. Similar conditions of the stools in the case of adults have been noted by Sir Joseph Fayrer in the so-called white diarrhœa of the tropics and by Dr. P. Manson and Dr. G. Thin in sprue. A condition of colourless stools has also been described by Dr. T. J. Walker of Peterborough in an interesting paper published in the Transactions of the Royal Medical and Chirurgical Society for 1889, as occurring in two cases of complete obstruction of the pancreatic duct. In one instance these colourless stools persisted uninterruptedly for a period of upwards of 20 years. Dr. Gee's cases and those of Dr. Gibbons occurred in children, but those described by Dr. Walker occurred in adults upwards of 50 years of age and the white diarrhœa and sprue of the tropics are met with chiefly in grown persons.

The term "acholia," which I have been in the habit of using to indicate this condition of abilious stools, has also, I find, been adopted by Dr. Manson to indicate the same phenomenon in the case of sprue. It is terse and emphasises the chief and most striking feature of the affection—viz., the absence of bile. This obvious and distinctive symptom of the disease varies somewhat in degree. In some cases the fæces are merely pale, fawn colour, or straw colour, in others clay-coloured only, like putty, but in more extreme and typical cases they are absolutely white, without a vestige of colour except a slight tint of grey—as white as pipeclay or white paint. Now, you are no doubt familiar enough with this absence of colour in the fæces—clay-coloured or white evacuations—in the case of jaundice. In this condition the bile does not pass into the duodenum; unable to escape out of the hepatic duct or common duct on account of closure or obstruction of the pipe the contents of the bowel are not coloured by it, and remain clay-coloured or white. The bile, held back in the liver and its ducts, is absorbed into the blood, the urine is charged with it, it stains all the tissues, and jaundice results. The pathology of the condition of white stools in jaundice as a consequence of obstruction to the outflow of bile is of course simple and intelligible. In acholia, however, there is no jaundice; the stools are as white as those of obstructive jaundice when bile is absolutely shut out from the intestine, but there is no resorption of bile into the blood, or if there is it must be quickly destroyed there, for there is no staining of the tissues by its colouring matter; it does not appear in the urine. Bile is clearly not pent up in the liver or it would be reabsorbed and its pigment would enter the circulation and appear in the urine and in the tissues as in ordinary obstructive jaundice.

Let us look more precisely into the conditions under which these colourless stools without jaundice are met with. In the first place, white stools of this character occur not infrequently in persons who live highly—in the matter of food and drink—and in people of gouty habit. Now and again they pass light-coloured whitish stools for a few days, accompanied by malaise, disgust for food, a general sense of being out of sorts, and with this often a yellowness of complexion not amounting usually to actual jaundice. After a cholagogue purgative and restricted diet the motions shortly resume their normal character. I have seen a similar condition arise from time to time in chronic Bright's disease and I imagine that a passing acholia may be more common than is supposed. We examine the urine most religiously, but the state of the fæces, in the case of adults at least, is little observed.

These examples of partial acholia are, however, casual, temporary, and of no importance except as signs of passing liver disorder. But white stools of more persistent character and of more serious import involving danger to nutrition occur also. They are met with in hot climates in fluor albus or white diarrhœa and in sprue, for which the former is probably only another name. In this country, however, acholic stools occur usually in children under five years of age, but by far the most often in the first two years of life. It must be borne in mind that young children who are fed entirely, or chiefly, on milk have naturally light motions, but these have always a distinct yellow or brownish tint, and can be distinguished from those of a true acholia. In a typical acholia the fæces are not merely pale, they are a dirty grey or absolutely white, in well-marked cases without a shade of yellow or brown. They are obviously as destitute of bile as those of complete obstructive jaundice. Usually they are slightly loose, like oatmeal gruel or milk gruel; sometimes, however, they are like a mass of white paste or white paint. And there is the other special feature—viz., that they are distinctly greasy in appearance, glistening, fatty. Another characteristic feature is that the stools are distinctly offensive—often horribly so—stinking. And, lastly, they are larger than normal, more voluminous, as if food taken in was imperfectly absorbed.

The onset of acholia in children is usually abrupt, as in the child mentioned in De Hirsch ward; all at once the colouring matter disappears from the fæces which quickly assume the greyish-white tint and the frothy, greasy, offensive, loose character already described. In other cases the change is more gradual, the stools, which at first are merely pale, becoming less and less coloured until all pigment disappears. The advent of these soft greasy, offensive, voluminous white stools is speedily followed by marked impairment of general health. At first there may be some rise of temperature, especially if dentition is troublesome, but after a time the temperature falls to normal or sub-normal, the appetite fails notably, and the child becomes pallid, languid, and enfeebled. The patient not only ceases to thrive but becomes flabby of flesh, loses weight,

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[1] St. Bartholomew's Hospital Reports, 1888, p. 17.

[2] Edinburgh Medical Journal, October and November, 1899

ch or hrex re and there a faint streak of yellow—greasy, like
mixture aint—and most horribly offensive from decomposing
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n which hal estinal flux. A mild diet of bread jelly with sugar
l essential and a little cream was given, also meat juice,
eatic functi andy as a hepatic stimulant. For a time the
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eturn of bile relapsed now and again for six months, the stools
e and greasy, white and loaded with undigested fat. No
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become perfect ed by Dr. Paul was that whenever fat was given
is thriving wel assed undigested—this and the colourless stools
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recovery protra , the stools have become healthy, and it is gaining
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was stated to have co specially chara wasting—viz., a mitral murmur
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Journal 11 t) was the extraordinary craving for food and
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by Sir Jo only at long intervals, but he took food eagerly.
the tropics view of the looseness and offensive stools, I
A conditi amount of food and restricted his diet to soft,
Dr. T. J ted matter: bread-and-milk, eggs, dry toast, and
publishe uice. I quickly found, however, that on this he
Chirurg t and strength more rapidly than before and I at
comple ceeded to increase the amount of nourishment.
Instan ressed progressively, to the great contentment and
for a e of the patient, whose capacity proved extra-
those Before long he took with entire satisfaction six
descr milk and some pancreatised milk gruel, in addition
50 ye great meals of solid food—eggs, bacon, meat,
tropics, pudding, as much as could be taken by a man in
T health with hearty appetite. In addition to full
usi he had massage and galvanism to the abdomen,
drug treatment was limited to bismuth to restrain
e flux and pancreatin in keratin capsules. The object
e keratin covering is, as you know, to protect the
ents from being acted upon by the gastric juice and
insure its passage intact into the duodenum where its
physiological action on food commences. On one or two occasions ox gall was given in this way with the striking result that the fæces, which were very acid, showed now streaks and patches of brilliant grass green colour; the addition of bile to the stools produced biliary colouring, indicating that the absence of this was the cause of the absence of colour. Under this treatment the patient began to gain weight—one pound a week only at first—and a slight brown colouration of the fæces developed; at the end of six months he had practically recovered. The bowel digestion had become normal. His weight had risen to 11 stones.

The preceding case was no doubt one of "sprue"—contracted abroad—in which white loose stools of this character, dry tongue, and progressive emaciation are the main features. I have related it for the sake of comparison with the acholic condition in children. The condition of the stools in the two forms is absolutely identical; some of the symptoms, notably the appetite for food, are different.

With regard to the pathology of these conditions, naturally the first question which arises is whether bile is actually excreted by the liver at all, or whether it is bile pigment only which is wanting, or whether although it is formed it is wholly reabsorbed—not partially only—or so changed in transit that it fails to colour the fæces? An explanation on this latter hypothesis has been put forward by Dr. Walker of Peterborough, based upon the two cases of obstruction to the pancreatic duct before mentioned. Dr. Walker suggests that there is some defect in the transformation of the biliary pigment so that it is not converted into the hydrobilirubin of the fæces; that this transformation is normally effected by the pancreatic secretion and that the absence of this, as in his cases of occlusion of the pancreatic duct, is the cause of the absence of the normal colour.

That the functions of the liver are gravely interfered with, and possibly those of the pancreas also, seems certain from several considerations. 1. The stools are obviously greasy; in some instances you can see fat standing on the surface so thick that they glisten like talc and on analysis are found to contain an enormous excess of fat, from 24 to 63 per cent., the normal being from 11 to 12 per cent.—i.e., twice to more than five times as in the normal state. 2. The stools are acid, or slightly alkaline only, and are extremely offensive, presumably from decomposition of fats owing to the absence of bile, which is known to have antiseptic power[3] and arrests fermentation.[4] 3. The stools are large in volume out of proportion to the food taken, indicating imperfect digestion and absorption. 4. The patient wastes rapidly, and in protracted cases becomes greatly emaciated, white, flabby, and anæmic. 5. In all cases bile pigment is deficient and in extreme and typical cases, where the stools appear white, no trace of it can be found. Moreover, in the most marked cases analysed by Dr. Willcox the bile acids were entirely absent also. In the case of sprue the results of different observers in this respect are contradictory. The effect of the administration of ox gall in producing green colouration of the stools points to the absence of this being the cause of absence of colour. 6. Although the urine has only been fully examined in two cases, in one urea was largely deficient (only 0 45 per cent.) and in another in excess, and crystals of leucin were observed, this being indicative of imperfect liver function.

As far as I know no definite lesion has been discovered post mortem. In the one fatal case which I have met with no post-mortem examination was permitted, but it is stated by Dr. Gibbons that the intestines show no marked change and the only abnormal conditions met with are some enlargement of the spleen and anæmia. The liver, where one would expect the secret might lie hidden, is normal in appearance. In sprue there are extensive necrotic erosion of the mucous lining of the bowel and the stomach is similarly affected. But these, as Dr. Manson observes, are obviously not primary changes, but the result of primary changes, as in starvation, and do not explain the acholia. The pancreas occasionally shows isolated patches of parenchymatous change, but these are not constant. The absence of bile colouring matter and of bile, the quantity of undigested decomposing fat, the wasting (the deficiency of urea and the existence of leucin if confirmed), all point to an arrest more or less complete of the cholagenetic function of the liver, as pointed out by Dr. Manson in sprue, and not merely to an abnormality of bile pigmentation only, and possibly of other intestinal digestive functions also. The explanation given by Dr. Walker of the absence of colour being due to the want of pancreatic secretion essential to its production seems to be negatived in this instance by the fact that the constituents of bile are absent and by the result of the administration of ox bile previously mentioned. This produced brilliant patches of bilirubin in the fæces, showing, I think, that it was the biliary element not the pancreatic that was missing.

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[3] Tulmann and Gmelin have shown that the fæces become much more fetid after ligature of the common duct.

[4] Carpenter's Physiology.

Causation.—As to the cause—as in sprue—it is most obscure. The frequency with which acholia arises during dentition, especially difficult and painful dentition, the known influence exerted by the nervous system upon gland secretion—as, for example, the effect of stimulation of the chorda tympani upon salivary secretion—the effect of reflex irritation of the spinal cord in lessening the secretion of bile, and, on the other hand, the effect of nervous excitement in producing jaundice, favour the view put forward by Dr. Gibbons that the disease has a nervous origin. It is possibly a dental irritation reflex. We know that this is a cause of diarrhœa and it may be of acholia. The only other condition in addition to teething with which I have noted acholia to be possibly associated is surface chill. It has seemed to me most common in the cold spring east wind time Yet I think the nervous inhibition—a reflex from difficult dentition—is the most probable pathological cause.

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THE DIFFERENTIATION OF THE CONTINUED AND REMITTENT FEVERS OF THE TROPICS BY THE BLOOD CHANGES.[1]

By LEONARD ROGERS, M.D., M.R.C.P. LOND.,
CAPTAIN I.M.S.; LATELY ACTING PROFESSOR OF PATHOLOGY, MEDICAL COLLEGE, CALCUTTA.

THE great advances which have been made during the last few years in the microscopical methods of diagnosis of malaria and typhoid fever respectively have placed in our hands the power to differentiate, with far greater accuracy than was previously the case, these the most frequently met with and the most important of tropical fevers. Further, by enabling these two to be separated out, we are enabled to investigate, with much greater hope of obtaining at least approximately correct results, the very difficult and all-important question as to whether there are any as yet undifferentiated fevers remaining to be carefully examined and described. The large hospitals of Calcutta furnish an unrivalled field for such an inquiry and, thanks to the great kindness of the medical staffs of these institutions (all of whom are officers of the Indian Medical Service, to whom I desire to express my great obligation), I have been able during the last one and a half years to examine the blood and to carry out the serum tests in about 200 cases of continued and remittent fevers of all kinds, in both the Presidency General Hospital, which admits European patients only, and in the Medical College Hospital, where the majority of the patients are natives of India. The cases have been taken consecutively, as far as possible, every case being examined when time permitted. Further, I have in my possession clinical notes of the cases and four-hour temperature charts, which have been carefully analysed in order to see how far a study of series of different forms of continued and remittent fevers, as proved by the blood and serum examinations, will enable any rules of value to be laid down for their clinical differentiation. The subject is too vast a one to be treated adequately within the limits of a single article, but the principal conclusions which have been arrived at may be set forth and the evidence on which they are based may be summarised.

The nomenclature and classification of tropical fevers adopted by various Indian writers are too varied to be referred to in detail, so it will be best to start with that which Dr. A. Crombie, C.B., laid down in his address in the Medical Section of the Indian Medical Congress of 1894, which may be taken as a valuable summary of what can be said on the subject of the differentiation of Indian fevers, by means of purely clinical methods, by an observant physician of great experience, mostly acquired in the very hospitals in which I have been recently working. In addition to malarial intermittent and remittent fevers, Dr. Crombie in his presidential address in Medicine and Pathology at the Indian Medical Congress in 1894 describes under the head of "continued fevers" three certain and two more doubtful forms, as follows:—1. Simple continued fever, lasting from three to eight days and including three-fourths of the fevers commonly returned under the head of "ague" in India. 2. Typhoid fever, extremely rarely found in natives. 3. "Non-malarial remittent," lasting from three to six weeks, commonly fatal and mostly seen in natives. Doubtful fevers: 4. "Calcutta fever" or "Bombay fever," being an aggravated "simple continued fever," lasting for 14, 21, or 28 days. 5. Low fever, the temperature varying from 99° to 101·5° F., being very persistent, not affected by quinine, but often cured by a complete change.

No. 3 in the above list Dr. Crombie regards as being the most important undifferentiated fever remaining to be thoroughly investigated and its organism identified It was mainly in the hope of separating it, and perhaps other fevers, so as to be able to search for its cause, that the investigation now being described was undertaken. Nearly all the long-continued fevers occurring in the large Medical College Hospital have been examined in the pathological laboratory for a space of 18 months; and at the same time nearly daily visits were made to the General Hospital at the other end of the town for the purpose of examining all similar cases there. In order to simplify matters as much as possible and to avoid repetition, it will be best first to describe my methods and results, and then to compare them with Dr. Crombie's clinical types.

METHODS OF RESEARCH. THE DIFFERENTIAL LEUCOCYTE COUNT.

In addition to the serum tests for typhoid fever and Malta fever and the search for malarial parasites, a new method described by me a year ago[2] has proved to be of the greatest value in this inquiry—namely, the increase in the percentage of lymphocytes in typhoid fever and of the large mononuclear white corpuscles in malarial fevers, by which means alone in the great majority of cases a correct diagnosis can be arrived at by the examination of stained blood films with an ordinary high-power lens. My earlier results have been amply confirmed by the much larger series of cases since examined, while Captain T. H. Delany, I.M.S.,[3] has obtained precisely similar results in upwards of 100 cases examined by him in the Medical College Hospital. The great advantage of this method lies in the fact that the result is in no way interfered with by the previous administration of quinine, as in the search for malarial parasites. As long ago as 1896[4] I showed from an examination of 100 cases of consecutive malarial fever before the administration of quinine that in only one-third of them could the malarial parasite be found by means of a prolonged search of a single blood film; and the absence of the parasite from the peripheral circulation in untreated cases has recently been emphasised by Dr. Stephens and Dr. Christophers.[5] In a still larger proportion of cases which have been treated with quinine will negative results be obtained Thus Maynard,[6] working in the *Calcutta General Hospital* in 1895, found parasites in only 25 7 per cent of 70 cases of malarial fever, nearly one half of which had previously taken quinine *As in my present series quinine had been nearly invariably* given before I was able to examine the blood the search for the parasites was negative in the great majority of *the cases examined* and *no conclusions can be drawn* as to the proportion of malarial fevers in the series from the number in which parasites were found This is also in entire accordance with Captain Delany's[7] recent results for in only 17 per cent of undoubted cases of malarial fever examined by him were parasites found on account of the previous exhibition of quinine while in *over 90 per cent* he was able to *diagnose them correctly* by the large mononuclear leucocyte increase It is worthy of note that Captain Delany and myself, or frequently independently, did counts on the same cases at different times yet never arrived at a different diagnosis The constancy with which a positive Widal reaction for typhoid fever has been accompanied by an absence of any large mononuclear increase, while on the other hand a negative reaction, together with a large mononuclear increase, has been found in nearly all cases which were either obviously malarial *clinically or* which were *subsequently proved to* be so by their reaction to the quinine test in this large series of cases, appears to me to be in itself conclusive as to the great diagnostic value of the leucocyte count Stress is laid on this point at the outset because much of any value in the differentiation and classification of tropical fevers which this paper may possess depends on the correctness or otherwise of this new test, in addition to the serum reaction I have already described the method of counting which I have adopted, so need not repeat it here Briefly, it may be said that blood films were made by spreading out a small drop of blood on a slide by means of the gliding motion of a needle, they were fixed in alcohol and stained by Romanowsky's method Counts were made by working from edge to edge of the middle of the film Mononuclears which were as large as, or larger than the average polynuclears, only were counted as large mononuclears *From 250 to 500 leucocytes* were counted, the smaller number having been found to be quite trustworthy in most cases after some experience

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[1] A paper read before the Royal Medical and Chirurgical Society on May 12th, 1903.

[2] Brit. Med. Jour., April 5th, 1902.

[3] Ibid., March 28th, 1903.

[4] Indian Medical Gazette, 1896.

[5] Report of the Malaria Commission of the Royal Society.

The importance of recording the temperature every four hours scarcely needs emphasising, and its value in differentiating between the continued type of many cases of typhoid fever and the severer forms of malarial remittent fever will be dealt with later

TYPHOID FEVER IN EUROPEANS

It will be well to deal with this, the best known continued fever of the tropics, first, so as to be able to have a standard with which others can be compared During the last year an unusually large number of cases of typhoid fever have been admitted to the *European General Hospital* as will be seen from a glance at the upper curve of the appended charts showing the seasonal incidence of fevers so that out of 126 cases of all kinds examir

the past one and a half yea

fever The notes and blood

tabulated in shorthand, so a brief analysis of the most important points regarding them may be given

Age incidence and duration of fever—These are shown in Tables I and II —

TABLE I —*Showing Age Incidence*

Years	5	6-10	11-15	16-20	21 25	26-30	31-40	Over 40	Total
Cases	2	3	11	18	7	6	1	2	50

The percentages in each period can be obtained by doubling the figures given and it will be seen at once that the age distribution of these cases is typically that of typhoid fever

Table II —Showing Duration of Fever

Days	1-7	8-14	15-20	21-25	26-30	31-40	Over 40
Cases	1 (died)	2	8	19	7	6	7

In the very great majority of these cases among Europeans accurate histories can be obtained, so that the accompanying data with regard to the duration of the fever are fairly reliable, although doubtless two or three days at the beginning of some of the milder and shorter cases may have been overlooked by the patients or their relatives In only two cases did the fever last less than 15 days (omitting one case fatal on the fifth day), these being abortive cases which will be referred to again In eight more cases the fever is recorded as having lasted less than 21 days, one of which proved fatal on the seventeenth day Three of them lasted *for 18 days, one for 19 and the other three for 20 days* These were mostly mild cases in which an insidious onset may have been overlooked for a time Of the above cases *lasting less than three weeks all but two were in patients* under 21 years of age typhoid fever being well known to be milder in young persons. Between the periods of from 21 to 25 days, 19 cases or 38 per cent of the whole, fall, while seven cases lasted from 26 to 30 days, six cases from 31 to 40 days and the remaining seven for upwards of 40 days, including four cases in which relapses occurred, the longest *time having been 69 days These figures are also characteristic* of typhoid fever

Clinical characters—With the exception of a few mild cases which did not show very marked symptoms of typhoid fever but were diagnosed by the serum test the series was as a whole typical of the disease and most of them had either been diagnosed as typhoid fever or were suspected to be such before the blood examination was reported In 39 of them looseness of the bowels, with more or less characteristic stools, was noted at some period or other of the fever, while 13 showed constipation *In four hæmorrhage was noted,* in one of which it was attributed to coincident dysentery Characteristic spots were noted in 16 cases, while in 13 they were recorded as having been absent During the hot and rainy season prickly heat is often so extensively present as to make a search for typhoid spots a difficult and uncertain proceeding, but for which they would probably have been found in a larger proportion of cases, for I find that they

months and

Europeans,

the utmost

diagnostic importance as in only eight cases was the abdomen noted as normal and that usually in an early stage of the disease, while in eight more there was no note on the subject, the clinical records having been scanty in some of the milder cases In the remaining 34, or 68 per cent, there was distension, tympanites, or tenderness, or, most frequently, two or more of these symptoms *together were noted The spleen* was felt below the edge of the ribs in only 12 cases and the liver in 16 cases The pulse was frequently noted to be *dicrotic and bronchial* catarrh or congestion of the bases of the lungs also occurred fairly frequently All the above points taken together constitute a *typical* clinical picture of a series of typhoid fever cases which will serve for comparison with other tropical continued and remittent fevers and only the important question of the type of the fever curve remains to be considered under this heading

The temperature curve—The clinical differentiation between a continued and a "remittent type of fever, although simple enough in well marked cases presents difficulties when it is desired to draw a hard and fast line between them As, however, the separation of the continued type, so characteristic of most cases of typhoid fever, from the "remittent' type of severe malarial fevers is of the utmost practical importance an attempt must be made to draw the line somewhere Bearing in mind that the malarial remittent fevers are caused by the malignant tertian parasites, we should expect a marked remission at least every other day in these cases, while any case in which the temperature varied through a range of only two degrees or less for slightly over 48 hours (to allow for some degree of "postponement' in malarial remittent fevers running a favourable course) may be considered to be of a "continued" type The practical value of this definition will appear *presently* and we may now see how frequently this "continued' type occurs in typhoid fever and how early it is present in a characteristic degree An examination of the *four* hour temperature charts of my 50 cases of typhoid fever from this point of view gave the following results. During the first week of the disease there were admitted 29 cases of which 20 were admitted on or before the fifth day and 11 on or before the fourth day leaving three and four days respectively of the first week for observation in hospital yet eight of them showed the 'continued type within that time During the second week 21 more cases showed it and two others during the third week and three at later dates Thus 34 out of the 50 cases presented this feature at some time or other in the course of the disease the great majority of

second week

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[6] Indian Medical Gazette 1895 p 412

[7] Brit. Med. Jour March [illegible]th, 1903.

sprue, and not merely to an abnormality of bile pigmentation only, and possibly of other intestinal digestive functions also. The explanation given by Dr. Walker of the absence of colour being due to the want of pancreatic secretion essential to its production seems to be negatived in this instance by the fact that the constituents of bile are absent and by the result of the administration of ox bile previously mentioned. This produced brilliant patches of bilirubin in the fæces, showing, I think, that it was the biliary element not the pancreatic that was missing.

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[3] Ibid., March 28th, 1903.

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The lymphocyte increase in typhoid fever —I have else here[8] drawn attention to the value of a marked increase the percentage of lymphocytes without any note orthy increase of the large mononuclear white cor- iscles in differentiating typhoid from malarial remittent vers, and subsequent experience of a large number of ises has amply confirmed, and in some respects extended, y earlier results My former paper on this subject as largely based on cases of fever in natives who ery frequently do not come to hospital until far on in ie disease, so that the great majority of the cases were not amined until the third or fourth week when a well

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iange in the blood In the following table the number of aminations in each week of the disease in which varying egrees of lymphocyte increase were found is shown in a onvenient form for studying the degree and frequency of the hange

TABLE IV —*Showing Lymphocyte Increase in Typhoid Fever*

First week—No increase = 26				Increased = 46				Total
umber of lympho cytes	0–20	20–25	25–30	30–35	35–40	40–50	50	
irst week	—	—	2	1	1	1	—	5
econd week	3	—	7	4	5	4	1	24
hird week	4	1	1	2	3	5	4	20
ater	4	3	1	3	2	7	3	23
Totals	11	4	11	10	11	17	8	72

f the 50 cases there were no increase in 12 and an increase i 38 cases or 72 per cent.

From the above table it appears that the lymphocytes ere increased above the normal limit of 30 per cent. in bout three quarters of the cases, and this change may even e found in the first week, in the majority of the cases in ie second week, and in almost three quarters of them during ie third week of the disease, when it frequently reaches a igh degree Its value, however, is even greater than these gures denote for as a rule the cases in which it is absent re of a severe type which can be recognised as probably yphoid fever at a glance, while in the mildest cases it is sually particularly well marked, that is just where it is most anted. The absence of the lymphocyte increase late in the

stablishment of immunity and the lymphocyte increase Vhen in a case of continued fever the lymphocytes are icreased, and especially if over 35 per cent are found and t the same time there is no marked increase of the large iononuclears (which is so characteristic of malaria) then it s exceedingly likely to be a case of typhoid fever In cases f malarial remittent fever a similar count may rarely be obtained at the height of the daily rise of temperature, but in these cases the total number of leucocytes present will be very greatly reduced, usually to about 1000 per cubic millimetre—a condition which I have only seen in malarial and never in typhoid fever cases It is important, then, to note the percentage of large mononuclears met with in the series of typhoid fever cases, so that they may be compared with that of the malarial series to be dealt with presently Table V shows the results obtained

TABLE V —*Showing Large Mononuclear White Corpuscles in Typhoid Fever*

—	Normal			In excess		Total
Percentages	0–4	4–8	8 10	11 15	+15	—
Total examinations	37	24	4	4	3	72
First and second weeks	—	—	1	1	1	—
Third week	—	—	—	—	—	—
Later	—	—	3	3	2	—

From this table we find that in only 11 out of 72 examinations were the large mononuclears above the normal 8 per cent and in only three was the increase found during the first three weeks of the fever when the diagnosis might possibly have been in doubt. In one of these malarial parasites were found in the blood, the large mononuclears having numbered 18 per cent., and in another, in which 15 6 per cent were found, typhoid fever had supervened on a malarial fever, and in the remaining one there were reasons for believing that the typhoid fever was also complicated by malaria. The highest number of large mononuclears met with in a patient suffering from typhoid fever was 18 per cent, and malarial parasites were also found in the blood at the same time as a Widal reaction was obtained in a dilution of 1 in 100 (Case 6) In the remaining instances in which over 10 per cent were found the fever had reached from the thirty-fourth to the seventy ninth day and normal numbers of large mononuclears had been found in the earlier stages It is clear, then, that the occasional high percentage of these corpuscles in the blood of typhoid fever patients in the earlier stages of the disease usually denotes coincident occurrence of malarial infection which requires appropriate treatment, while in the later stages there may be some increase after the end of the third week in prolonged cases of pure typhoid fever, but this can scarcely mislead at such a late period of the disease A similar late large mononuclear increase has been recorded by Winter in Dublin[9] As we shall see immediately, a marked large mononuclear increase is so characteristic of malarial remittent fevers that its absence should lead to a suspicion of typhoid fever as against malaria, and that, too, even in the absence of a marked increase of the lymphocytes I have several times correctly diagnosed cases of typhoid fever in an early stage by this point, leucocytosis of pneumonia or cerebro spinal fever, &c, being also absent

TYPHOID FEVER IN NATIVES OF INDIA.

The frequency or otherwise of typhoid fever in natives of India was a perennial source of controversy in the pre Widal days As the subject is of great importance in relationship to the so called "non malarial remittent" fever of Dr Crombie it must be briefly referred to here, reference being made to a paper in which I dealt more fully with the subject a year ago for further details[10] Dr Crombie used to hold that typhoid fever very rarely occurs in natives and supported his conclusion by the statement that only three cases were returned as such in the large Medical College Hospital in the ten years 1880 89 By means of the serum test I found twice that number in the wards of the same hospital at one time and 11 cases in five months That number has in the course of 18 months been increased to 26 together with others in different hospitals and institutions in Calcutta, while reactions in high dilutions have also been obtained with the blood of native fever patients sent to me from various parts of Bengal Lamb has also obtained similar results in Bombay Clinically they do not differ essentially from the same disease in Europeans, only they tend to be more severe and fatal on account of the late stage of the disease in which they are commonly admitted, while bronchial affections are more common and diarrhœa less so than in Europeans, the stools being less typical, probably on account of the largely vegetarian diet of the great majority of the patients. The disease is also somewhat more common among children in natives, no doubt on account of their greater exposure to insanitary conditions. More important are the duration and type of the fever for comparison with those of other fevers. Out of 21 cases of typhoid fever in natives, with confirmation by Widal's test in the Medical College Hospital, of which I have full notes, five died before the end of the third week. Of the remainder all but one suffered from fever for three weeks or more, the exception having only given a reaction in a dilution of 1 in 20, and clinically also the diagnosis of typhoid fever was not quite beyond suspicion. Nine cases lost their fever between the twenty-first and the twenty-fifth days and the other six at later dates. These results agree closely with those recorded above in typhoid fever in Europeans and lend no support to the view that the disease is commonly abortive and of short duration in natives, although it may very occasionally be so. With regard to the type of the disease, in just half of the cases the "continued" type, as defined above, was observed; that is a somewhat smaller proportion than in Europeans, possibly due to the greater frequency of complication with a malarial element in the case of natives. In the other cases the fever was of a remittent type, although usually less markedly so than in true malarial remittent fevers. Abdominal symptoms, such as distension, tympanites, or pain, were nearly always met with at some period of the disease—a most important clinical diagnostic feature. With regard to the serum test, reactions in dilutions of 1 in 20 only were obtained in two; in 1 in 40 in six more; and in 1 in 100 in 18 cases—a result closely comparable with those in Europeans. Similarly with the leucocyte count: in two-thirds of 30 examinations a lymphocyte increase to above 30 per cent. was found, in all but four of which over 35 per cent. were present. On the other hand, in 27 examinations the large mononuclears were not over the normal limit of 8 per cent., and in the remaining three cases they were under 9 per cent., which, we shall see presently, clearly differentiates them from malarial remittent fevers.

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[8] Ibid April 5th, 1902

[9] Dublin Journal of Medical Science, October 1901

[10] Indian Medical Gazette, January 1902

The above brief summary is sufficient to prove that typhoid fever is a common continued fever of natives of India and that it differs in no noteworthy respect from the same disease in Europeans in this country.

MALARIAL REMITTENT FEVERS.

We next have to deal with the great class of malarial remittent fevers the differentiation of which from typhoid fever in their earlier stages is in many instances one of the most difficult problems in tropical medicine. In the first place we must define the term "remittent" and draw some line between it and intermittent cases, for these terms are often very loosely used, different meanings being attached to them by various observers. For instance, in many cases of malignant tertian malarial fever the temperature remains high for some 36 hours and then falls to about normal for a few hours before the same cycle is repeated. This is essentially an intermittent type and the term "remittent" should be reserved for those cases in which the temperature remains well above the normal line for some days. In an analysis of the General Hospital records to ascertain the seasonal prevalence of the different forms of fever, therefore, I adopted the plan of classing cases under the head of "remittent fever" only when the temperature did not fall below 100° F. for two or more clear days and the following data are also based on a series of cases complying with this definition. I find in my tables 29 cases of acute malarial remittent fever in the European General Hospital which both the clinical course and the result of the exhibition of quinine clearly proved to be malarial. Further, they were all examined by the serum test for both typhoid and Malta fever with negative results in all but one man who had suffered from a severe attack of typhoid fever in South Africa two years before and whose blood gave a reaction in a dilution of 1 in 40. All these cases had been liberally dosed with quinine before I had an opportunity of examining their blood, so that the fact that in only a small proportion of them were malarial parasites found in no way negatives their malarial nature. Moreover, as we shall see presently, nearly all of them showed the typical large mononuclear increase of malaria, which fortunately is not masked by quinine and hence has a peculiar diagnostic value in such a series as this. By analysing them in a similar manner to the former series of typhoid fever cases we shall be able to get a clear idea of the diagnostic value in the two fevers of the blood changes; and if these are found to afford sufficient ground for believing that the two diseases have been separated with a considerable degree of accuracy then a comparison of the course and symptoms in the two series may be expected to furnish us with some useful data for their clinical diagnosis. They may be conveniently considered in the same order as in the cases of typhoid fever.

The qualifying term "acute" malarial remittent fever is used above in order to exclude cases of chronic malarial fever —best designated by the valuable old, but comprehensive, term malarial cachexia (which workers in the malarious parts of India desire to see restored to the official nomenclature of the Royal College of Physicians of London)—for in these also the remittent type of fever occurs now and then interspersed in the generally intermittent course of the disease. As I have recently showed elsewhere,[11] there are certain special blood changes of great importance found in such cases—namely, an extreme reduction in the total number of the white corpuscles, accompanied by a great relative reduction in the polynuclears, with a corresponding increase in the percentage of the lymphocytes as well as the typical increase of the large mononuclears of acute malaria if marked fever is present. These changes are of great prognostic value and I have suggested that they may explain the great resistance of such cases to ordinary doses of quinine and also the success I have recently had with very large ones by the mouth or the hypodermic use of the drug in chronic malaria. Interesting as this class of cases are they fall beyond the scope of the present paper, for they cannot well be mistaken for typhoid or other "continued" fevers.

Age incidence.—This is shown in Table VI.:—

TABLE VI.—*Showing Age Incidence.*

Years ...	5-10 ...	11-15 ...	16-20 ...	21-25 ...	26-30 ...	31-40 ...	Over 40
Cases ...	2 ...	3 ...	10 ...	4 ...	6 ...	3 ...	1

This shows a very similar incidence to that of typhoid fever, so that no diagnostic import attaches to the ages of the patients in the case of these two fevers.

The duration of the fever.—This is of much greater importance, for we have seen that typhoid fever very rarely runs a course of much under three weeks. In Table VII. the total duration of the fever both before and after admission is given in the second line and the time the fever lasted under treatment in the hospital, where quinine was always given in smaller or larger doses, is shown in the third line:—

TABLE VII.—*Showing Duration of Fever.*

Duration of fever in days...	1-7	8-14	15-20	21-25	26-30	31-40	Over 40
Total duration ...	3	8	8	2	4	1	3
Fever in hospital...	12	11	3	2	1	—	—

Here we see a marked difference from typhoid fever the duration of which exceeded 20 days in four-fifths of the cases and in only 4 per cent. ended within two weeks. Still more marked is the difference in the duration of the fever after coming under treatment, for the majority of the cases of typhoid fever were admitted during the first week of the disease and therefore had two weeks or more fever in hospital, while in the case of the malarial remittent fevers under treatment with quinine almost four-fifths came to an end within 14 days of admission and over one-third within one week. This is in agreement with the conclusion I came to over a year ago[12] with regard to continued and remittent fevers in natives (excluding cases of malarial cachexia)—namely, that upwards of 80 per cent. of such fevers which lasted three weeks or more were typhoid fever.

Clinical characters.—The chief points in which acute malarial remittent fevers differ from typhoid fever are mainly of a negative character. Thus, in the former diarrhœa, abdominal distension and pain, rose spots, and bronchial catarrh are absent or rarely met with. Hæmorrhage from the bowel is very rare except when dysentery complicates the disease. On the other hand, the spleen is much more frequently and markedly enlarged in the malarial remittent fevers and the liver is also frequently to be felt below the ribs. A history of chill or rigors or fever on and off for some time previously is in favour of a diagnosis of malarial remittent fever but it is also not very rarely obtained in cases of typhoid fever in the tropics so that it cannot be relied on very much

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[11] Ibid., November, 1902.
[12] Ibid., January, 1902.

The temperature curve —This is of great importance, for although the remittent type is commonly seen in typhoid fever yet the rises and falls are, as a rule, much more regular and punctual to the hour in malarial remittent fevers and also usually of greater amplitude When the rises occur regularly at some other period of the 24 hours than the afternoon or early evening, the case is nearly certain to be malarial Of even greater value is the fact that in all my charts I can only find one case of malarial remittent fever in which the temperature remained within 2° for upwards of 48 hours, and at a height of above 101°, unless there was some complication such as pneumonia Every other case in which this continued type of a high degree was present proved to be enteric fever and not malarial Of course a similar type is common in pneumonia but here the presence of leucocytosis will exclude uncomplicated typhoid fever As this continued type is most frequently seen during the first and second weeks of typhoid fever it is of very great diagnostic value and has frequently enabled me correctly to diagnose typhoid fever in an early stage of the disease before other definite symptoms were present, and I look on the establishment of this point by means of my study of a large number of four hour charts of continued and remittent fevers controlled by serum and blood tests as a most important practical outcome of this investigation The contrary, of course, does not hold good, for, as we have seen, the curve in true typhoid fever may be remittent or even rarely intermittent, and may also occasionally show as great regularity of the remissions as in malarial cases There remain, then, a number of cases in which the temperature curve will not be of any material service and it is in these that the serum tests and leucocyte counts are of such great value

The pulse rate —It is a well known feature of typhoid fever that the pulse may remain below 100 per minute persistently for days when the temperature is raised to 103° or 104°, especially in cases which are running a favourable course A large proportion of my cases have shown this point in a well marked degree On the other hand I can only find one chart out of a number in which the pulse rate was recorded in which it remained persistently below 100 per minute in malarial remittent fevers and this was a very mild one in which the temperature never rose above 101 2° This slow pulse rate when present is a valuable point in favour of
nittent fever, while it is most
ses which are most difficult to
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already mentioned, all the cases here dealt with had been saturated with quinine for some days before I was able to examine them, so that the parasites were seldom found in the single slide made on the one or, rarely, two occasions when the blood was tested When present they were always of the malignant tertian variety, but out of the 29 cases referred to above in only six of them, or 20 7 per cent, were they detected Romanowsky's stain being always used. This agrees closely with Captain Delany's results in the Medical College Hospital, Calcutta, in very similar circumstances[13] In two cases however, the temperature had finally reached normal before they were examined, and in three more it was on its final fall If these are excluded as extremely unlikely to show parasites, then they were found in 25 per cent of the remaining cases

The serum reaction, as already mentioned, was negative except in one man who had had typhoid fever two years before. That for Malta fever was also negative, except that in one or two cases a clumping in a dilution of only 1 in 10 occurred, as happens occasionally, in my experience in normal bloods and in those of persons suffering from various diseases other than Malta fever[14]

The large mononuclear increase in malarial remittent fever —Table VIII shows the percentage of large mononuclears found in 34 examinations of the blood arranged in the same way as that already given for typhoid fever cases except that they are classed in accordance with the temperature when the film was taken instead of the week of the disease—the former having an important influence, for, as shown by Dr Christophers and Dr Stephens[15] the large mononuclear increase becomes less marked as the temperature rises

TABLE VIII —*Showing the Large Mononuclear Increase in Malarial Remittent Fevers*

—	Normal or slightly increased			Markedly increased 30			Total
Percentages	0-4	4-8	8-11	11 15	15-20	Over 20	
Temp - 101° F	0	2	1	7	7	4	21
Temp + 101° F	0	1	0	8	3	1	13
Total	0	3	1	15	10	6	34

We see from Table VIII that in only four out of 34 examinations were the large mononuclears less than 11 per cent, and in one of these they were increased over that number at a second examination when the temperature had fallen to normal This is just the reverse of what we found to be the case in typhoid fever, in only two cases of which during the first three weeks of the disease were over 11 per cent large mononuclears found and these were complicated by malaria, so that by the leucocyte count alone the two forms of remittent fever can almost invariably be differentiated It will also be observed that the highest percentages of large mononuclears are met with in examinations made when the temperature is below 101°, as compared with those made when it is above that point which is in accordance with the observations of other workers on malaria, as mentioned above

TABLE IX —*Showing the Lymphocytes in Malarial Remittent Fevers*

—	Normal 23			Increased 11				Total
Percentages	0-02	20-25	25-30	30-35	35-40	40-50	60	
Number of examinations	7	8	8	4	3	3	1	34

From Table IX we see that more than two thirds of the
[illegible] e lymphocytes while a marked
instead of being the rule, as
points taken together are of
rential diagnosis of the two
fevers and will very rarely indeed mislead if the precaution is taken of examining the blood in the morning during a remission of the fever in cases suspected to be malarial, for it is at this time that the increase of the large mononuclears is best marked

The quinine test —Before leaving the subject of the malarial remittent fevers we must discuss how far the diagnosis of malarial remittent fever made by means of the differential leucocyte counts has been borne out by the results of subsequent anti malarial treatment, for unless they will stand this test in patients not yet the subject of marked malarial cachexia they cannot be relied on Now in several of these cases the patients had been taking quinine in 10 grain doses three times a day by the mouth for a week or more with little or no effect on the temperature curve and this would be held by some to be sufficient to prove that they were not of a malarial nature This opinion may be true of malaria in some countries but it is utterly untrue of many cases of malaria as seen in Lower Bengal and other parts of India—a point on which I cannot lay too much stress as this fallacy has been responsible for much lingering fever and many deaths During the last fever season at the Calcutta General Hospital as soon as a large mononuclear increase has been found in cases which have resisted quinine by the mouth the drug has been given hypodermically in from 5 grain to 10 grain doses twice a day, the bi hydrochlorate being used and injected into the subcutaneous tissues. The results have been admirable for in case after case the temperature has fallen to normal in two or three days The leucocyte count, then has come triumphantly out of the ordeal of the quinine test, although in most of these cases no parasites could be found in the peripheral circulation and fortunately no opportunity of finding them after death has occurred, although a few years back necropsies were not very rare in this class of cases especially when quinine was ordered to be given only when the temperature was below a certain point, with the result that the drug was reduced in direct proportion to the severity of the case, instead of being increased.

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[13] Brit Med Jour March 28th 1903.
[14] Indian Medical Gazette October 1902.
[15] Report of the Malaria Commission of the Royal Society

Are there any continued or remittent fevers other than typhoid fever and malarial fever?—As already mentioned, this investigation was started with the object of separating out the known fevers with a view to studying the undifferentiated ones described clinically by Dr. Crombie and others, with whom I quite thought that such existed. So far I have dealt with 50 cases of typhoid fever and 29 cases of acute malarial remittent fever. In addition to these, six cases of chronic malarial remittent fever and 11 more cases of malarial intermittent fever are included in my European series, making a total of 96 cases out of the 126 cases examined in the General Hospital. Among the remaining cases we first have a miscellaneous assortment, including cases of phthisis, pneumonia, cerebro-spinal fever, liver abscess, cellulitis, and other local inflammatory conditions, all showing varying degrees of leucocytosis which in several cases materially assisted the diagnosis. For example, in one case malarial parasites were believed to have been found by the medical officer in charge but the fever increased steadily in spite of hypodermic injections of quinine and I was asked to examine the blood. Finding leucocytosis (13,000) and pain over the liver and in the right shoulder, I diagnosed liver abscess but the supposed parasite had greater weight than the leucocyte count and the patient was sent on a voyage to Colombo, where his liver abscess was successfully opened. In another case a child suffered from an obscure fever and two examinations of the blood failed to reveal any evidence of either malaria or typhoid fever, the case soon after developing into one of tabes mesenterica. In two other cases an irregular fever with some degree of leucocytosis accompanied dysentery, probably of the amœbic type.

When all the above well-known diseases are excluded, what have we left in the way of continued fevers? Practically nothing. Some three or four cases, all in the first 20 examined when my experience was very limited, remain, and looking at the notes and charts of these in the light of my present experience I cannot find one which repeated examination would not in all probability have proved to be either typhoid fever or malarial. One of these I thought at the time might correspond with the type which Dr. Patrick Manson describes under the term "double continued fever" but I have since seen very similar cases which proved to be malarial and yielded to full doses of quinine. In my last 100 cases I have met with very few doubtful ones and none which I have any good reason for thinking might be a new and undifferentiated fever, disappointing as it is to have to say so. What, then, are the cases described by Dr. Crombie continued fevers?

"SIMPLE CONTINUED FEVER."

bie holds that three-quarters of the cases which gly returned under the head of ague belong to the he terms "simple continued fever." He describes them ushered in with a rigor, followed by high fever, with che and gastric disturbance, and lasting from three eight days, but sometimes resembling a mild attack of typhoid fever and going on for two, three, or four weeks, in which case he calls it "Calcutta fever." They are most commonly attributed to "exposure to the sun." Now in the year Dr. Crombie's address before the Indian Medical Congress on fevers was published I undertook an investiga- of 100 consecutive fever cases in a native regiment in Chota Nagpur; and a microscopical examination and an analysis of the symptoms convinced they were all malarial. "Simple continued fever," has been very commonly diagnosed in the Calcutta Hospital by those who had the advantage of study- under Dr. Crombie himself and several cases quite lly as he describes them, which had been diagnosed this term, are included in my table of cases. Each of showed the large mononuclear increase of malaria; several showed a typical tertian character, and they were each cured with quinine. I have not yet had an opportunity of examining these cases immediately on admission before they had taken quinine, so I am not prepared to state positively that there are not non-malarial fevers of this type; but if so I am certain that they are not anything like as common as Dr. Crombie holds, but I hope to be able further to investigate this point before very long. In the meantime some light may perhaps be thrown on the subject by a comparison of the seasonal incidence of the cases returned as simple continued fever and as malarial intermittent fever respectively; for if they are quite different diseases, and especially if the former is commonly due to exposure to the sun, this should be quite different, for the malarial season in Calcutta is the rainy one when the sun is seldom seen. In the lowest part of the accompanying charts the cases returned under these two heads month by month during the last three years are shown, the cases of malarial intermittent fever being represented by the uninterrupted lines and those of the simple continued fever by the broken ones. I find it has been more or less the custom in this hospital to look on short fever cases with any enlargement of the spleen as undoubtedly malarial and of those without any enlargement as being very probably "simple continued fever," especially if there was no history of chill or rigor. Now one of the first things which strikes a medical man on going to India is the frequency with which typical ague is absent in purely malarial fevers, especially malignant tertians. Further, in first attacks, which will be most frequent at the beginning of the fever season, the spleen will not yet be enlarged. Cases of malarial intermittent fever without enlargement of the spleen will occur in greatest numbers at the beginning and be fewest at the end of the malarial fever season when they will more frequently show an enlarged spleen due to repeated attacks of the disease. If now we examine the chart of the cases diagnosed under these two headings for the years 1900 and 1901 we see that in both years the two coincide very closely, both in monthly incidence and in number, the only difference being that in the first year the curve of the so-called "simple continued fevers" both rose and fell a month earlier than the malarial cases, this being precisely what might have been expected if all the cases were really malarial in nature but those without enlargement of the spleen had more frequently been wrongly called "simple continued fever." During the year 1902 it will be observed that this supposed new fever has nearly completely disappeared, especially during the malarial fever season, while at the same time greater attention has been paid to the use of the microscope in the diagnosis of the fever cases. This agrees with my former conclusion that nearly if not quite all of these short fevers are malarial in nature and that "simple continued fever," if it exists at all, is an uncommon disease and should not be diagnosed until malaria has been excluded by an examination for malarial parasites, or, if quinine has already been taken, also for the large mononuclear increase. It is also worthy of note in connexion with the supposed relationship between "simple continued fever" and "exposure to the sun" that the cases returned under this head are fewest during the dry, hot months of March to May and greatest in the cloudy months of the rainy season. The existence of "simple continued fever" as a separate specific disease still remains to be proved.

"NON-MALARIAL REMITTENT FEVER."

Next we come to the fever which Dr. Crombie describes under the above term and which he regards as the most important tropical fever the specific organism of which awaits its discoverer. It has been a great disappointment to me not to have been able to find this fever to exist at all, as I believed it did when I began this investigation; but on reading over again Dr. Crombie's description of the disease the mistake into which he has fallen is quite easy to understand in the pre-Widal and leucocyte-count days. To make the matter clear it will be necessary to quote from his writings on the subject, bearing in mind his statement that true typhoid fever is very rare in natives of India and that only three cases were returned as such in the large Medical College Hospital in the ten years 1880–89. He summarises his description of it in these words: "This condition, one of persistent high temperature without any marked remission, a distinctly enlarged and congested liver with bilious diarrhœa, a congestion of the back of both lungs, and a low muttering delirium, is generally reached by the eighteenth to the twenty-fourth day. If coma supervenes the patient frequently dies at this period." He also states that quinine has no effect on the fever and that although he has seen it in Europeans yet "it is essentially a disease of natives and is not common after 30 years of age." With the exception of the absence of the yellow stools of typhoid fever in Europeans, no doubt owing to the vegetarian diet of most poor natives, this appears to me to be as good a description of typhoid fever as I have seen; yet it is prefaced by the remarkable statement that the fever "is by some considered to be a variety of typhoid fever *notwithstanding its divergence from all the symptoms of that disease.*" It agrees absolutely with the large number of cases of typhoid fever in natives verified by Widal's test during the last 18 months in the Medical College Hospital. Further, every such case with the continued type of fever and the absence of pneumonia, &c., in this hospital has proved on blood examination to be typhoid fever, so unless Dr. Crombie's fever has disappeared and typhoid fever has taken its place in the last few years there can be no doubt that his "non-malarial remittent fever" so commonly occurring in natives

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find any case of such a continued fever as Dr. Crombie describes in the European General Hospital which has not proved to be either typhoid or malarial. It is worthy of note that he mentions that in his supposed new continued fever "the temperature is generally very high, touching 104° and 105° for a long part of its course, the daily fluctuations not exceeding 2° to 2·5° F." Now we have seen that all such cases have been proved by the serum test to be typhoid fever. This question may also be examined in the light of the seasonal incidence of typhoid fever as opposed to all other continued and remittent fever, including malarial remittent fever. The middle curve of the charts already referred to shows all the latter cases and the top one all the typhoid fever cases for the last three years in the European General Hospital. The maximum typhoid fever season is a very definite one, being reached in each year in the dry cold weather and hot weather months (for we have no spring in Bengal) in the first five months of the year and thus corresponds with the minimum malarial fever season. In the first two years charted there is also a slighter rise in the curve in the rainy malarious months but this is absent in the last year when the serum test was regularly used. It would, however, have appeared as usual had not several cases which had originally been diagnosed as typhoid fever proved by the blood examinations to be malarial remittent fever. The rainy season small rises of the first two years were probably also due to a few cases of malarial remittent fever having been wrongly diagnosed as typhoid fever. If now we turn to the curve showing all the other remittent fever cases (all truly continued ones having proved to be typhoid fever) we find that the main rise in the curve each year is in the same months as the malarial remittent fevers were most prevalent. This is in exact agreement with the conclusion I have arrived at by means of the blood tests—namely, that the only remittent fever other than typhoid fever is the malarial remittent fever. A few cases were returned as "simple continued fever" but they showed the remittent type, as defined in a previous section in this paper, and they also occurred most commonly during the malarial season. These curves of the seasonal incidence of the remittent fevers other than typhoid fever, then, strongly support the view that all such cases are malarial and give no indication of the existence of any new undifferentiated fever in the tropics, the existence of which I now very gravely doubt.

LOW FEVER.

Although this is not, strictly speaking, a continued or remittent fever, but rather an intermittent one, yet as it is included under the former term by Dr. Crombie it may be briefly referred to in conclusion. I am glad in this case to be able to agree with him as to the existence of this as a clinically distinct fever, on which the few observations I have yet been able to make may perhaps throw a little fresh light. Dr. Crombie well describes it as "a persistent low elevation of fever temperature unaccompanied by any constant symptoms, of indefinite duration, and uninfluenced either by quinine or arsenic. The temperature never falls below 99° F. and rarely rises above 101·5°." It is met with in Europeans and causes much depression and is generally cured by a change of climate or a sea trip. I have, however, several times known it to recur on the patient's return to Bengal, even after long leave to England. In my experience also the rise of temperature is always in the afternoon and never at other odd times, as not unfrequently happens in malaria. I have only had an opportunity of examining the blood in a few cases of this fever but have always found a marked reduction in the total number of leucocytes, accompanied by a disproportionate decrease of the polynuclears and a corresponding increased percentage of lymphocytes. Thus the total count may be from 2000 to 5000 per cubic millimetre, while the polynuclears will be reduced to about 50 per cent., or even less, and the lymphocytes increased to 40 per cent., or even more. Now this is just the change met with in cases of malarial cachexia in the absence of active malarial fever, when the large mononuclear increase is not found. On the other hand, we know that when the general health is bad there is a tendency for a reduction of the polynuclears to occur and it may well be that long-continued exposure to the debilitating influences of a tropical climate may produce an exaggerated condition of this nature. This weakness and want of resisting powers may lead to a loss of complete control by the heat-regulating centres, allowing the body temperature to rise with the afternoon increase of that of the surrounding atmosphere. Against this simple explanation is the fact that I have on two occasions known more than one member of a family affected by this form of fever, which might be held by some to indicate its being of a specific nature; but, on the other hand, in one of these instances one of the two sufferers subsequently developed an attack of ordinary malarial fever. The curative effect of a change of air also points to its being a condition of debility rather than a specific fever and, although I am not prepared to dogmatise on the subject with such a small experience, I am inclined to think that the disease is climatic rather than specific and that latent malaria may play a large part in its causation. With regard to treatment, I have seen the fever disappear and at the same time the percentage of the polynuclears increase while oil of eucalyptus was being given—a drug which was suggested to me as useful in increasing the leucocytes by Sir Thomas Lauder Brunton; but my cases are too few to allow me to say definitely that the drug has a curative effect on this form of fever without further evidence.

MALTA FEVER.

This concludes the discussion of the different forms of continued fever which have been described as occurring in the tropics, with the exception of Malta fever. I have tested the blood of upwards of 100 cases of continued and remittent fever by the serum test with the Malta fever micrococcus but with entirely negative results with the exception of an occasional reaction in a dilution of 1 in 10 only, which I have given reasons elsewhere [16] for believing to be of no diagnostic value. I find records of cases in the General Hospital in sailors who have recently visited Mediterranean ports, so that our medical officers are familiar with the disease both from this and from their Netley experience; but I find that they are nearly all agreed in considering that this disease does not occur indigenously in Lower Bengal, whatever it may do in North-West India. This statement is equally true of Assam in my experience which is confirmed by that of Major Ronald Ross.

ILLUSTRATIVE CASES.

The 12 following cases have been selected to illustrate the most important points dealt with in this paper. Cases 1 to 6 were cases of typhoid fever and Cases 7 to 12 were cases of malarial remittent fever.

CASE 1 (Serial No. 14).—Clinically this was a typical case of typhoid fever. The Widal reaction was negative on the fifteenth and twenty-fifth days. The lymphocytes increased to 38·2 on the fifteenth and to 47 per cent. on the twenty-fifth day, without any increase of the large mononuclears. A chart shows the continued type of fever from the ninth to the eleventh and from the thirteenth and fourteenth days, the temperature not having varied more than 2° on those days.

CASE 2 (Serial No. 19).—This was an abortive case of typhoid fever which was not suspected to be such until a brother and sister were admitted for fever and I found that all three gave a positive Widal reaction for typhoid fever, as did two more of the same family admitted shortly after. The fever in this case lasted only 14 days, yet the lymphocyte increase was very marked, 50·4 per cent. being found. In my experience these mild cases, as a rule, show it particularly well.

CASE 3 (Serial No. 48).—This case precisely resembled No. 2, except that the reaction for typhoid fever was negative on the seventh and twenty-first days; but the lymphocyte increase was well marked, 48·8 per cent., on the second examination, the large mononuclears not being increased, so that I am inclined to regard it as an abortive case of typhoid fever, or it may possibly belong to the class recently called paratyphoid fever. It was one of the very few doubtful cases in the series.

CASE 4 (Serial No. 41).—This case is of interest from several points of view. Clinically, it was for some time regarded as malarial in nature. On examining the blood on the ninth day the Widal reaction was negative but the lymphocytes numbered 39·6 per cent. without any increase of the large mononuclears and I diagnosed the case as typhoid fever on the strength of the leucocyte count. On the eighteenth day a second examination was made and now a positive Widal reaction for typhoid fever was obtained, while the leucocyte count remained practically the same, my diagnosis in the early stages thus being confirmed. I have met with other cases in which I have correctly diagnosed typhoid fever by the leucocyte count before the appearance of the serum reaction, the latter having given a positive result at a later stage of the disease. Another point of interest is the intermittent type of the fever, the patient having been a child, this type of typhoid fever not being very rare in children.

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[16] Indian Medical Gazette, October, 1902.

CASE 5 (Serial No. 56).—This was a typical very severe case of typhoid fever which proved fatal on the nineteenth day. It shows well the "continued type" of fever and also illustrates the absence of the lymphocyte increase in very severe cases which has already been mentioned as being of prognostic value.

CASE 6 (Serial No 62).—This was a case of typhoid fever complicated by malaria admitted late in the disease and giving a serum reaction in a dilution of 1 in 100. The leucocyte count showed 18 per cent. of large mononuclears, which raised a suspicion of malaria and after some search a few malignant tertian malarial parasites were found. During convalescence a typical attack of malarial fever also occurred. The typhoid symptoms were severe and the temperature was of the "continued type," while the lymphocytes showed no increase during the height of the fever.

CASE 7 (Serial No. 7).—This was a case of remittent mlarial fever showing well-marked fall of temperature every other day and an increase of the large mononuclears to 16·4 per cent. and yielding to quinine in five-grain doses every four hours. The case was diagnosed at first as one of "simple continued fever" and I have seen other similar cases which proved on examination with the microscope to be malarial in nature.

CASE 8 (Serial No. 89).—This was a case of severe malarial remittent fever yielding rapidly to quinine hypodermically. This is the only malarial case I have yet met with in which the temperature remained within 2° F. for two days. At the first examination of the blood, when the temperature was high, 12 4 per cent. of large mononuclears were found but three days later, when it had fallen to normal, they numbered 28 per cent.

CASE 9 (Serial No. 92).—This was a typical case of a malarial remittent fever rapidly cured by the hypodermic use of quinine after the failure of the drug in 10 grain doses three times a day by the mouth. No parasites could be found when the blood was examined four days after admission, when much quinine had been taken, but 15·6 per cent. of large mononuclears were present which enabled a correct diagnosis to be made.

CASE 10 (Serial No. 107).—This was another case of malarial remittent fever diagnosed by the large mononuclear increase, in spite of a positive reaction for typhoid fever due to a severe attack of the disease in South Africa two years before, and successfully treated by hypodermic injections of quinine.

CASE 11 (Serial No. 115).—This was another case of malarial remittent fever with 21·2 per cent. of large mononuclears and scanty malignant tertian parasites where recovery rapidly ensued with quinine injected hypodermically after failure of the drug by the mouth.

CASE 12 (Serial No. 122).—This was a case of malarial fever showing a double daily rise of temperature and was very resistant to treatment with quinine. The large mononuclears numbered 16·4 per cent. The patient left the hospital unrelieved. No parasites were found on the single occasion when the blood was examined after much quinine had been taken. These cases of double daily rise are in my experience particularly difficult to treat and they deserve closer examination.

CONCLUSION.

The general conclusion arrived at by the careful clinical and pathological study by modern blood tests of a large and consecutive series of cases of continued and remittent fevers in both Europeans and natives in the hospitals of Calcutta, then, is that only two forms exist, at any rate of long duration—namely, typhoid fever and malarial remittent fever. Further, these can be distinguished in a considerable proportion of the cases by purely clinical methods, of which the temperature curve and pulse-rate and presence or absence of abdominal symptoms and the action of quinine are the most important. The remainder can be differentiated by the serum test or by the differential leucocyte count in all but a very few exceptional cases, the leucocyte count being of special value in the tropics on account of its being available when parasites are absent as a result of previous quinine treatment and its not requiring a laboratory—laboratories being very few and far between in the tropics at the present time—while it also has some prognostic value.

"Simple continued fever," if it exists at all as a separate entity, which still remains to be proved, is very rare indeed as compared with malarial fevers. The so-called "non-malarial remittent" fever in natives has been shown by the serum test to be nothing but typhoid fever. Low fever is distinct clinically, but is probably the result of the debilitating influences of prolonged residence in a tropical climate, including latent malaria, and is not a new specific fever. Malta fever does not occur, or at least is exceedingly rare, in Lower Bengal and Assam.

ON CASES OF UNCOMPLICATED MYOCARDITIS IN CHILDREN.[1]

By GEORGE CARPENTER, M.D. LOND.,
ASSISTANT PHYSICIAN TO THE NORTH-EASTERN HOSPITAL FOR CHILDREN; LATE PHYSICIAN TO THE EVELINA HOSPITAL FOR SICK CHILDREN.

MYOCARDITIS has been divided into parenchymatous and interstitial and the lesions encountered are either circumscribed in single or multiple areas or are diffuse in their distribution. Further, the parenchymatous and the interstitial changes in the cardiac walls, although they may occur independently, are not infrequently associated in varying degrees. The degenerative changes in the muscle fibres, in the shape of albuminous, fatty, and waxy alterations caused by toxin poisoning, are met with in the initial stages of the infectious diseases and occur during convalescence; these also arise from other disorders and are now well known in the post-mortem room, but rarely is it possible to diagnose these changes during life, though they may be suspected. But parenchymatous myocarditis is not necessarily a fatal complaint, even when the symptoms are extremely well marked, as an illustration of my own, to be related later, will show.

Interstitial myocarditis, which is looked upon as a rare disease, is met with as an acute disorder, or as a chronic complaint of the cardiac wall which is thought to be rarer still. Of 56 cases of chronic myocarditis collected by Quain, but three occurred in children.[2] The commonly recognised causation of the acute disorder is pyæmia from bone and joint troubles. The common sequence is the formation of an abscess in the heart wall which either bursts into the pericardium, producing pericarditis, or into the endocardium and originates an acute cardiac aneurysm. Of 25 cases of abscess of the heart collected by Quain 14 of them occurred under 15 years of age.[3] On the other hand, pyæmic pericarditis may be associated with, and not be the cause of, interstitial myocarditis.

Acute myocarditis of rheumatic origin must be here mentioned, for although perhaps the changes in the heart muscle are usually more of the nature of parenchymatous degeneration than of interstitial inflammation, nevertheless these conditions are usually associated. Acute myocarditis has been found in connexion with old and with recent valvular disease and also with pericarditis. It has also been met with in scarlatinal pericarditis.

In regard to chronic interstitial myocarditis Dr Theodore Fisher[4] has called attention to the fact that small fibroid patches are frequently seen scattered through the heart muscle in fatal cases of mitral stenosis. He gives an illustration of fibrous myocarditis in a lad 18 years old, associated with old aortic disease. He also relates a case of an infant four and a half months old who was found post mortem to have fibroid disease of the cardiac muscle and stenosis of the aortic valve Chronic interstitial myocarditis may also be associated with adherent pericardium but it is not, however, in every case of hypertrophied heart from adherent pericardium that such changes can be found microscopically. Sclerotic patches in the heart may also take their origin in occlusion of the coronary arteries, syphilitic or otherwise. Syphilitic myocarditis, in the shape of solitary and multiple gummata, has been recorded in infants and children and Hektoen[5] has published a case of syphilitic interstitial myocarditis in an infant six weeks old. Dr. J. Porter Parkinson[6] has also shown to the society a syphilitic nodule in the heart of an infant, aged three months, which was composed of young inflammatory tissue in various stages of development, the adjacent muscle being infiltrated and destroyed.

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[1] A paper read at the meeting of the Society for the Study of Disease in Children on Feb. 20th, 1903.

[2] Keating's Cyclopædia of the Diseases of Children, vol. ii., part 2, p. 841.

[3] Ibid., vol. ii., part 2, p. 840.

[4] Bristol Medico-Chirurgical Journal, March, 1900.

Judging from the paucity of the literature on this subject it is a malady about which little is known and which therefore requires further attention on the part of those specially studying children's complaints. The following striking examples of so rare an affection as uncomplicated myocarditis appear to me to be of sufficient interest to bring them to the notice of members of this society, in the hope that by calling attention to myocarditis and to the necessity for combined action our knowledge on this subject may be materially strengthened thereby.

CASE 1.—The patient, a girl, aged six years, was the child of healthy parents, but with a strong family history of phthisis. She had a rash on her buttocks and "snuffles" soon after birth. She had been ailing for a month, her illness commencing with enlarged glands in the neck, and her mother said that she had wasted and suffered from a swollen abdomen and complained of pain at the pit of the stomach. When she was admitted into the Evelina Hospital on Sept. 3rd her face was dusky and her lips were blue. The cardiac impulse, which was feeble, was felt with difficulty outside the nipple line in the fifth interspace. The dulness commenced at the third left costal cartilage and extended well to the right of the sternum. A whistling systolic bruit was heard over the cardiac impulse and a systolic thrill was felt on placing the hand over the cardiac area. There were no adventitious sounds to be heard in the lungs. The abdominal walls were flaccid and the liver, which was pulsating, reached almost to her umbilicus. The spleen was not enlarged. She passed 18 ounces of urine during the first 24 hours; it was of a specific gravity of 1026 and it contained about one-third of albumin. The pulse-rate was 132 to the minute, the respiration-rate was 56 to the minute, and the temperature was 97·6° F. By the 6th the bruit was not to be heard and the liver was returning to the costal margin. Her general condition had greatly improved. On the 12th she was still blue round the mouth. The cardiac impulse, which was exaggerated, was felt half an inch outside the nipple line. There was no epigastric impulse and the area of cardiac dulness was not enlarged to the right. The first sounds at the apex and the left base were reduplicated. The liver was now on a level with the costal margin. The specific gravity of the urine was 1024, 18 ounces were passed, and it contained one-eighth albumin; there were no casts. The temperature was still subnormal. The pulse-rate was 100 to the minute and the respiration-rate was 32 to the minute. On the 15th there was a trace of albumin in the urine, on the 16th one-fortieth, on the 17th there was none, and it was subsequently free during her stay in the hospital. On Oct. 1st she was found to have paralysis of the soft palate and the knee-jerks could not be obtained. By the 22nd food ceased to pass by the nose and the soft palate had in great meas [illegible] nt. On Nov. [illegible] lth with a so [illegible] history revealed the fact that three weeks before her admission into the hospital she had "patches" on the throat for which the medical attendant ordered a paint, but she was not ill enough to be confined to her bed.

CASE 2.—The next case is that of a girl, aged nine years, who was admitted into the Evelina Hospital on Sept. 2nd for a swollen abdomen and shortness of breath. The former trouble was supposed to have started in the preceding January. Her father suffered from heart disease. On admission she was a well-nourished, rosy-cheeked child and the most striking features of her case were a regurgitant venous pulse in the neck and an obviously pulsating liver. The pulse-rate was 112 to the minute, the respiration-rate was 46 to the minute, and her temperature was normal. The cardiac impulse was half an inch outside the nipple line; it was not well defined. There was a suspicion of a thrill to be felt there. The area of dulness, which commenced at the left third costal cartilage, extended half an inch to the right of the right sternal margin. There was no bruit. The lungs were normal. The spleen was not enlarged. The free edge of the liver was a hand's breadth below the costal margin in the nipple line. The urine was free from albumin. Whilst under observation she had paroxysmal attacks of facial cyanosis. Sometimes her lips were blue and sometimes the face was flushed. By Sept. 9th the liver had decreased in size and pulsation was not so marked. Several examinations of the urine had been made prior to this date but with negative result. On the 11th suddenly the face became very blue, the eyes were fixed and the limbs were rigid, the pulse was imperceptible at the wrist, and she died.

At the post-mortem examination the lungs were found to be very dropsical. The pericardium was healthy. The heart weighed nine ounces.[7] The left ventricle was pale, hypertrophied, and showed tabby-cat striation. The left auricle was dilated, thin, and pale. The endocardium was smooth. The mitral valve showed hæmorrhages at its root and in the valve itself; it admitted three fingers. The aorta presented patches of atheroma above the left coronary artery. The right ventricle was considerably dilated, pale, and showed tabby-cat striation. The right auricle was also much dilated, and its substance was pale. The liver, which was of the "nutmeg" type, weighed 2 pounds 14 ounces. The kidneys weighed 7½ ounces; they were heavy, hard, and leathery. The glomeruli were injected and the vessels of the medulla stood out prominently. The spleen was not enlarged. The stomach was congested.

Under the microscope the muscular fibres of the heart, for the most part, showed well-marked longitudinal striæ. In places the transverse striæ were well or fairly well marked but in others they required very careful focussing for their detection. On the other hand, though quite exceptionally, some fibres or portions of a fibre had a ground-glass appearance with obliteration of all striation. Accentuation of longitudinal striation and faintness or absence even of transverse striation were the prevailing characteristics. The muscle corpuscles with but few exceptions stained readily everywhere and many of them were very large and prominent. Certain microscopical fields showed an abundance of vessels; occasionally a small vein was found between the muscular bundles surrounded by a crowd of white corpuscles. Slight or an easily recognised increase of nucleation of the intermuscular areolar tissue with readily detected diapedesis of white corpuscles from the neighbouring capillaries was noticed throughout, together with proliferated areolar tissue cells; but here, again, areas were found where this had not occurred and the nuclei were quite within normal limits. Specimens stained with osmic acid were unaffected. The pericardium and the endocardium were free from abnormality.

In this case the cause of the interstitial myocarditis was not determined; in the next illustration, however, there appears to be no doubt that rheumatism originated the malady.

CASE 3.—A girl, aged eight years, was admitted into the Evelina Hospital on August 20th. Until two months previously she was perfectly well but she then developed rheumatism and subsequently suffered from chorea. On admission she had rheumatic synovitis of the left hand and wrist, the left ankle and the back of the corresponding foot, and a slight effusion into the left knee-joint. Her pulse-rate was 120 to the minute, the respiration-rate was 44 to the minute, and the temperature was 100·4° F. She had a loud mitral murmur which was audible at the angle of the scapula and a few rhonchi were detected in the lungs. Under salicylate of sodium the temperature had fallen to normal by the 27th. On Sept. 8th she was quite free from articular pains and fever, but there were great distress of breathing and considerable præcordial pain. Neither the pulse-rate nor the respiration-rate had increased in frequency. The cardiac impulse was much diffused; it was felt in the sixth interspace half an inch outside the nipple line. Systolic and presystolic murmurs were now heard and a systolic thrill was felt in the fourth left intercostal space. The liver was greatly enlarged and its lower edge reached as far as the umbilicus. The spleen was not increased in size. The urine was free from albumin. The ankles were œdematous. By the 11th the pulse had assumed a peculiar form; alternate periods of from 10 to 20 beats succeeded one another with great regularity. The rate of one set of beats was about 120 to the minute and the rate of the other set was 60 to the minute. The respiratory movements did not undergo any corresponding change. She died quite suddenly on the morning of the 12th.

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[5] Carpenter, Syphilis of Children, p. 57.

[6] Reports of the Society for the Study of Disease in Children, vol. i., pp. 141, 142.

[7] Normal weight about four and one third ounces.

At the necropsy both lungs were extremely œdematous; many old, dry, cheesy deposits were found in the bronchial glands. The pericardium was normal. The heart was much enlarged. The left ventricle and auricle were dilated and the substance of the former was pale but not friable. The mitral valve, which was free from endocarditis, admitted four fingers. The aortic valves were healthy. Here and there in the substance of the ventricular wall yellowish dots and striæ were seen and the tips of the papillary muscles, especially those in relation with the mitral valve, were much spotted with yellowish deposits of about the size of a pin's head. An identical condition to the above obtained on the right side of the heart and here also the endocardium was free from disease. Under the microscope portions of the ventricular walls, taken at random, appeared to be quite healthy. On examining a dotted fragment it was seen that the muscular fibres in certain small areas had entirely disappeared, their place being occupied by countless oil globules of various sizes. Where it existed the change was extreme in degree though markedly circumscribed. The liver was greatly enlarged, it had a thick rounded edge, and was "nutmeg-like" on section. The spleen was normal. The pyramids of the kidneys were intensely congested. The other organs did not present any abnormality.

My next illustration is one of extensive focal myocarditis of a cicatricial nature and in this case the cause was not quite obvious, though possibly rheumatism played an important part in its genesis. There was no history or evidence of syphilis but there was a family history of consumption.

CASE 4.—A boy, aged 12 months, was admitted into the Evelina Hospital on Feb. 12th for disease of the hip-joint of four months' duration. Four months previously to Feb. 12th, according to the mother's statement, the back of the left foot, the left hand, and the wrist were swollen for about three days. During life the heart and lungs were apparently quite healthy. His temperature was above the normal whilst he was under observation, the highest point being 101° F. 48 hours after admission into the hospital he died suddenly.

At the necropsy miliary tubercles were found in the lungs, the liver, and the spleen. The synovial membrane of the hip-joint was thickened, but the bones appeared to be healthy. The pericardium was healthy. The left ventricle of the heart was dilated and scattered through its wall were a number of white areas, some rounded, others long and narrow, and many of them seemed to pass from the pericardium to the endocardium. The muscular substance where not involved looked healthy. There were two or three small rounded spots of infiltration in the substance of the right ventricle. The valves were normal. There was a valvular orifice at the foramen ovale.

On microscopical examination it was seen that areas of new growth invaded and broke up the muscle bundles from the pericardium to the endocardium. They were of varying sizes and when the microscopic sections were held up to the light it was seen that the outer half of the heart wall had been involved to the greater extent. Under the microscope were seen:—1. Wavy bundles of fibro-nuclear tissue with elongated wavy nuclei which sometimes invaded the muscle bundles and separated straggling muscle fibres from their fellows and here and there showed dense nuclear aggregation. Some of the muscle fibres thus isolated showed transverse striation, but in a few this appearance was lost and they were attenuated and opaque. 2. Areas where the connective-tissue fibrillæ were not so marked, though the nuclei were numerous and stained very well indeed. 3. Areas of varying sizes with increase of irregularly shaped nuclei in the intermuscular fibrillæ. The muscle corpuscles in such, in some instances, appeared to be quite large. 4. Areas, though few and far between, of perfectly healthy muscle fibre and connective tissue. 5. The endocardium much increased in thickness; the pericardium, where not joining the sclerosed tissue, unaltered. Although the endocardium was thickened the passage to it of sclerotic offshoots from the neighbouring muscle fibres was not a feature, but a nuclear increase in these was not uncommon, together with an undue separation of them from one another. The thickening often appeared to be quite independent of, and out of proportion to, any underlying mischief.

In conclusion, I should like to say that I have purposely confined myself to the narration of cases about which there can be no question as to the correctness of the diagnosis and I have intentionally omitted all reference to clinical cases of myocarditis complicated with pericarditis, peri- and endocarditis, adherent pericardium, and cardiac abscesses secondary to pyæmia.

I would also draw attention to the presence of systolic and presystolic murmurs in these free-from-endocarditis cases. It would appear that the mitral murmur merely requires for its production a leaking valve, that no roughness or irregularity of the segments is necessary to that end, and that a mitral murmur is not diagnostic of mitral endocarditis, though it is of mitral insufficiency; that the presystolic murmur and also the diastolic mitral murmur are indicative of a disturbance of the normal relationship that exists between the size of the mitral orifice and the left auricle; that when the latter is distended and the mitral ring is distorted the normal relationship disappears and leaves in its stead a *comparative* narrowing of the mitral orifice—in other words a comparative mitral stenosis for that particular heart; and that murmurs which depend upon these anatomical changes are indistinguishable clinically from the systolic and presystolic and diastolic murmurs of ordinary mitral disease and true mitral stenosis and that when these murmurs are present they are certainly much more in favour of endocarditis than the reverse by reason of the greater comparative frequency of that condition in heart disease, with the reservation that mitral stenosis in childhood is a rarity. Further, I would mention that I have heard similar murmurs produced in adherent pericardium associated with a dilated heart free from endocarditis as was pointed out by Dr. Theodore Fisher,[8] and in cases of pericarditis and myocarditis in which the endocardium of the valves was healthy.

But are not the clinical and pathological examples which I have just recorded the key to the explanation of the vanishing mitral murmurs which undoubtedly arise in some cases of acute rheumatism and of chorea and of the, in consequence, presumed recoveries from endocarditis and from supposed functional cardiac disorders? Do they not suggest that, in some instances at least, the supposed to be present endocarditis did not exist in reality? Do they not invite the conclusion that that which was present was a temporary softening and want of tone of the myocardium followed by dilatation and subsequent recovery, hence the appearance and disappearance of the mitral murmur. Such a condition of the cardiac muscle would also satisfactorily explain undue rapidity and irregularity of the heart's action in some cases of chorea. It would also explain in these cases of chorea one type of mitral murmur, that which is inconstant in both force and rhythm and is a not infrequent phenomenon in that disorder and which entirely disappears by the time the child has recovered or is found to have done so at a later visit. There is one strong point in favour of such a theory in explanation of these conditions and that is rheumatic myocarditis undoubtedly exists; we have clinical, supported by pathological, evidence of this. We also know that myocarditis can arise apart from endocarditis.

But myocarditis is not always attended by a mitral murmur even in an advanced condition of dilatation, nor is it always possible to map out the slightly dilated heart with precision; indeed, the softening might be so slight as to render its physical detection impossible but nevertheless capable of giving rise to definite symptoms. Some such supposition is also reasonable in explanation of the following examples of cardiac disturbance which I have noticed in rheumatic fever and with their recital I will bring this paper to a conclusion.

In one child, aged nine years, there was extreme weakness of the pulse without obvious lesion of the heart, though the first sound at the apex was almost inaudible. These symptoms lasted for about a fortnight and finally disappeared. In another child, aged five years, the pulse was intermittent and a little later a questionable systolic bruit was detected at the apex, but no further extension occurred, the intermission of the pulse disappeared, and the valvular sound once more became normal.

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[8] Bristol Medico-Chirurgical Journal, 1894; Brit. Med. Jour., 1894.

Welbeck-street, W.

MALIGNANT DISEASE OF THE COLON; 14 COLECTOMIES WITH 10 RECOVERIES.[1]

BY H. LITTLEWOOD, F.R.C.S. ENG.,
SURGEON TO THE LEEDS GENERAL INFIRMARY AND LECTURER
ON PRACTICAL AND OPERATIVE SURGERY IN THE
YORKSHIRE COLLEGE.

THIS paper is based on the study of about 26 cases of malignant disease of the colon which have occurred in my practice during the past four years. I have also included one case of malignant disease of the rectum; the disease was in the upper part and was removed by an abdominal proctectomy with end-to-end union, and for this reason I have added it to my list of colectomies. All the cases referred to were columnar carcinoma. I propose to deal with the subject under two headings (1) the diagnosis, and (2) the treatment. Under the heading of treatment I shall refer more particularly to the operation of colectomy. The cases of colectomy—14 in number—I have arranged in a special table, so that they can be more easily referred to; in these cases 10 of the patients made good recoveries and four died. In cases where colectomy is not possible or advisable owing to the general condition of the patient, the size and fixity of the growth, or the presence of secondary deposits, other operations may be required to relieve the patient, such as typhlotomy, colotomy, or the short-circuiting operation by lateral anastomosis.

DIAGNOSIS.

The diagnosis of malignant disease of the colon is sometimes quite an easy matter, but in the early stages of the disease it is often a matter of the greatest difficulty. Probably in all cases, when carefully inquired into, there is a history of increasing difficulty in getting the bowels opened. The patient may have noticed some blood or mucus in the motions. It is often only when these symptoms have increased so as to be a real inconvenience that the patient will consult a medical man. Many patients look upon constipation as an unimportant condition, for which they treat themselves by one or other of the natural mineral waters or patent pills which are now so seductively advertised. I feel that every patient suffering from constipation who consults a medical man should have the cause carefully in-[illegible] encouraging results by means of operation. If a patient has been in the habit of having his bowels opened at regular intervals and this regularity has been interfered with, so that the intervals have increased in duration or there have been one or more definite attacks of obstruction associated with "colicky" pains and the presence of blood and mucus in the motions, then a very careful examination of the anus and rectum must be made to ascertain if the cause of the obstruction is in this region. I have not had much experience in using specula for rectal examinations; I feel I can rely more on my sense of touch than on my sense of sight. If nothing is found by rectal examination—and it is a great thing to be able to exclude the presence of anything in the rectum—then the abdomen must be carefully examined.

On thinking over the cases of malignant disease of the colon which I have seen I divide them into two classes: (1) those in which a very definite tumour is present; and (2) those in which there is a constricting ring of growth which it is often impossible to discover by abdominal palpation. I am inclined to think that the larger tumours are invariably found in the cæcum, the hepatic flexure, or in the transverse colon and that beyond this point in the colon a large growth is the exception. The commonest seats in which to find carcinoma of the colon are the flexures; growths are most difficult to discover in the splenic flexure as it is so deeply hidden beneath the ribs; next to this those in the hepatic flexure are most difficult to find unless the tumour is of considerable size. A very large tumour *may be present and yet the patient may be unaware of* its existence until its presence has been pointed out by the medical man. In Case 12, where there was the largest mass which I have yet removed, the patient knew nothing of its existence. I think that it may also be stated, as a general rule, that the bigger the growth and the nearer it is to the cæcum the less likely is there to be obstruction—for this reason, that the motions are more fluid in the cæcal region and the larger growths are *less liable to contract and so to produce* a narrowing at the point of growth. If no growth can be discovered and still malignant disease is suspected, enemata and the inflation of the colon may sometimes give valuable help in diagnosis, or it may be necessary to give an anæsthetic and to make a more complete examination by palpation, specula, &c., and there are some cases in which we so strongly suspect carcinoma that we may feel it wise to recommend an exploratory operation. This we did in Case 4, and it is the earliest case of malignant disease of the colon upon which I have operated. A method which I learned from Mr. T. P. Teale I have sometimes found very useful when the patient is under an anæsthetic—i.e., to pass a pair of vulsella high up and to pull down the mucous membrane; by this means a growth high up in the rectum or sigmoid flexure may be brought within reach. Let me here point out the dangers sometimes associated with the use of enemata—I have twice seen fatal peritonitis due to a malignant ulcer bursting into the peritoneum during the administration of an enema, and in Case 6 I believe another enema might have produced a fatal result.

Up to the present I have assumed that we have been examining a case before any very definite obstruction has occurred. We will now consider those cases in which on the first time we see the patient acute obstruction is present and it may be that this is well marked before the patient has even [illegible] acute obstruc-[illegible] with or without [illegible] cold or discoloured extremities of fæcal toxæmia—and we may only be able to make a shrewd guess that the cause of the obstruction is malignant disease by excluding every cause which is more or less obvious. The age of the patient may help, but we must not forget that malignant disease may occur in quite young people; the youngest case (Case 11) in this series was 28 years of age.

TREATMENT.

If one sees the cases early and there is no intestinal obstruction then a primary enterectomy should be done and it often requires considerable judgment at the time of the operation to decide this point. I am quite convinced it was an error of judgment to perform a primary enterectomy in Case 11, but I shall refer to this later. There are several ways of doing the operation, many of them having good points, and naturally the surgeon will perform the operation best that he is most accustomed to. I am amongst those who believe that the suturing can be quite easily and efficiently accomplished without the aid of any of the special appliances which have been and are still being invented. Surgery is a handicraft and I hope will always continue so to remain, and not a branch of mechanical engineering, and it is the business of the surgeon to train his fingers so that he can use his needle with as much facility as a woman who makes any pretence to be a good needlewoman.

It is only during the last *four years that I have had many* opportunities of doing colectomy; my cases before this either had secondary growths or I thought that they were too [illegible] My first colectomy [illegible] was a woman with [illegible] typhlotomy and subsequently removed a mass from the ascending colon and united the divided ends by Halstead's method. Death occurred six months later when there were secondary deposits in the liver. Between this case and those which are included in the table of colectomies appended to this

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[1] A paper read before the Leeds and West Riding Medico-Chirurgical Society on Oct. 15th, 1902.

[2] THE LANCET, Oct. 13th, 1894, p. 852.

TABLE SHOWING THE RESULTS OF 14 COLECTOMIES PERFORMED FOR MALIGNANT DISEASE OF THE COLON.

No. of case.	Sex.	Age.	Nature and position of disease.	History.	Signs and symptoms at the time of operation.	Nature and date of operation.	Result.	Remarks.
1	F.	57	Large mass in the cæcum.	The patient had been ill for two months. She had had a great deal of pain in the right iliac region and the back. There was some constipation but no vomiting. She had lost weight.	There was a large tumour in the region of the cæcum, which could be both seen and felt. The patient's chief symptom was pain.	On June 18th, 1900, the cæcum and part of the ascending colon and mesentery were removed; the ileum was stitched to the cut end of the ascending colon.	A good recovery.	In this case there was no obstruction. The presence of the tumour and pain were the prominent features. No secondary growths were noted at the time of operation.
2	F.	46	Large mass in the hepatic flexure.	The patient had been ill for about five months and was getting thinner. She was suffering from constipation and occasional attacks of vomiting were noticed.	There was a large tumour in the hepatic flexure. Constipation was present.	On July 25th, 1901, about ten inches of the colon and the corresponding mesentery were removed. End-to-end union was effected.	A good recovery and the patient is apparently now quite well.	The case was seen with Dr. A. Dennison of Burley. The tumour was the prominent feature in the case. No secondary growths were noticed at the time of operation.
3	M.	34	Large mass in the transverse colon.	The patient had complained of a dragging pain in the lower part of the abdomen since August, 1900. The tumour was noticed a month later. There was no constipation.	There was a tumour in the lower and right part of the umbilical region. It was freely moveable and was of about the size of a closed fist.	On April 22nd, 1901, about six inches of the transverse colon, including growth, with mesentery, were removed. End-to-end union was effected.	A good recovery and the patient is apparently now quite well.	The case was sent to me by Mr. Edwin Lee of Dewsbury. The tumour was the prominent feature of the case. No secondary growths were noted at the time of operation.
4	M.	54	A small growth of the size of a florin in the splenic flexure near the mesenteric border involving about half of the lumen.	The patient thought that in September, 1900, he had strained himself whilst lifting; since then he had had on two occasions constipation and obstruction lasting for a fortnight. When in bed he was free from pain. He had been getting thinner.	The patient was suffering from constipation. There was no obstruction at the time of operation or evidence as to the cause of the obstruction. Early malignant disease was suspected.	On Nov. 22nd, 1900, a small malignant mass which was found in the splenic flexure was removed. End-to-end union was effected.	A good recovery and the patient is apparently now quite well.	The growth appeared to produce obstruction by tilting or possibly by producing a slight intussusception.
5	F.	37	Constricting mass of malignant disease in the splenic flexure.	The patient was apparently quite well until August 25th, 1900, when symptoms of complete obstruction revealed themselves.	There were well-marked signs of complete obstruction. The abdomen was distended, with well-marked visible peristalsis.	On Sept. 5th, 1900, the abdomen was explored in the middle line. The cæcum was enormously dilated and somewhat rotated. Typhlotomy was performed. On Oct. 22nd, 1900, a small ring of malignant growth was found in the splenic flexure and removed. End-to-end union was effected.	A good recovery and the patient is quite well at the present time. There is a little discharge at times from the typhlotomy opening.	At the first operation the cause of obstruction was not found. It was a very small ring of growth in the splenic flexure an the intestines we enormously di tended. The descen ing colon was al distended, probabl the result enemata.
6	M.	52	There was a mass of malignant disease surrounding the lower part of the sigmoid flexure at the pelvic brim. In one part the growth had ulcerated and in this cavity an orange-pip had lodged.	The patient had complained of pain in the body and of constipation for 12 months. Eight months before he had a violent attack of pain and vomiting and since then he had taken medicine regularly. He had lost weight.	During his stay in the infirmary before the operation the patient was examined several times, but the cause of the obstruction could not be discovered. Malignant disease of the colon was suspected. The bowels could be opened by means of purgatives and enemata.	On Dec. 17th, 1900, the abdomen was explored in the middle line and the mass of growth found in the lower part of the sigmoid flexure. About four inches of bowel were removed. The gut was severed through the lower part of the sigmoid flexure and the upper part of the rectum. End-to end union was effected.	A good recovery.	The stitching was ver difficult. On ex mining the specime it looked as if anothe injection would hav burst through th base of the ulcer an so might have pr duced a fatal per tonitis.
7	F.	43	Malignant growth surrounding the rectum; the lower limit could just be felt. It appeared moveable by bimanual examination.	Six months before operation the patient began to suffer from constipation. This at times alternated with diarrhœa and the passage of blood and slime. She lost weight	There was a tumour at the upper part of the rectum with passage of slime and blood.	On Feb. 27th, 1902, the patient being in the Trendelenburg position, the abdomen was opened in the middle line and about four inches of rectum were removed End-to-end union was effected.	A good recovery and the patient is quite well at present.	This was a ver difficult operation There was no evi dence of secondar growth. The case wa sent to me by D D. J. Macaulay o Halifax.
8	F.	53	Constricting ring of malignant disease in the hepatic flexure.	The patient had suffered for several months from chronic constipation which culminated in an attack of acute obstruction which was complete for a week.	There were complete obstruction and vomiting of offensive fluid. The abdomen was greatly distended. There was visible peristalsis. The pulse was rapid. There was no visible tumour.	On Jan. 10th, 1901, a constricting ring of growth was found in the hepatic flexure. Typhlotomy was performed and on Feb. 24th about three inches of the colon with the growth were removed. End-to-end union was effected.	The patient never really rallied from the operation and she died on March 1st, 1901.	At the necropsy th parts were in go apposition at the lin of suture. The growt was a small con stricting ring. Ther were no secondary growths. The cas was seen with Mr. J. N. Hawtin o Leeds.

TABLE SHOWING THE RESULTS OF 14 COLECTOMIES PERFORMED FOR MALIGNANT DISEASE OF THE COLON (*continued*).

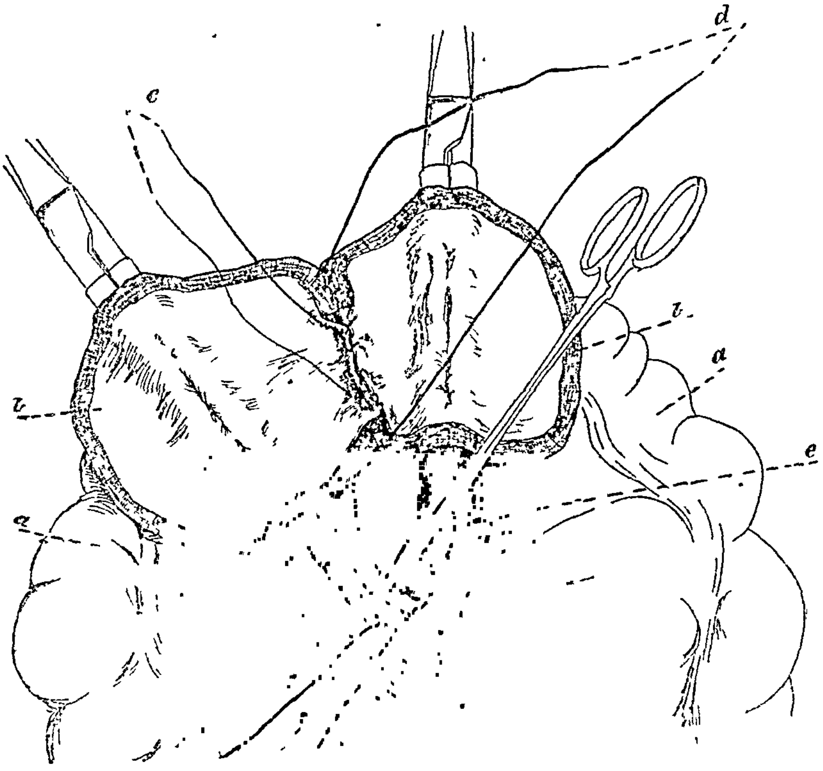
No. of case.	Sex.	Age.	Nature and position of disease.	History.	Signs and symptoms at the time of operation.	Nature and date of operation.	Result.	Remarks.
9	F.	42	Ring of malignant growth in the splenic flexure. No tumour could be felt.	The patient was apparently quite well till three months before, but had always had constipation.	The abdomen was a little distended, with well marked peristalsis. The abdominal wall moved a little with respiration. The patient had vomited everything since August 18th and there had been no passage of either motion or flatus. The pulse was 92 and of a good quality.	On August 24th, 1902, a constricting growth was found with difficulty at the splenic flexure. Typhlotomy was performed. On Oct. 14th the growth from the splenic flexure was excised. End-to-end union was effected.	A good recovery and the patient is now apparently quite well.	The patient was a long time convalescing from the first operation so that the second was delayed more than six weeks. After this she recovered well.
10	F.	60	Malignant stricture in the transverse colon was discovered after the removal of a large adherent ovarian cyst to which all the patient's symptoms were thought to be due.	For some months the patient had been getting large in the body and suffering from pain. She had some constipation which could be relieved with purgatives.	There was an ovarian tumour extending above the umbilicus. There were a good deal of tenderness over this and some constipation. The patient was very feeble.	On April 10th, 1902, the ovarian tumour was removed and at the end of the operation the malignant mass in the transverse colon was discovered and about five inches of the colon were removed. End-to-end union was effected.	The patient never really rallied from the operation and died on the sixth day.	The patient was sent to me by Dr. J. T. Haworth of Filey. She was really too weak for two such extensive operations but I felt at the time that it was worth the risk. The bowels were well opened on the fourth and fifth days by enemata. The patient died from heart failure. A necropsy was not allowed.
11	F.	28	Malignant stricture in the descending colon, with a small circular constricting growth.	The patient had always suffered from constipation and three months before had had a well-marked attack of obstruction which lasted a week.	There were well-marked signs of intestinal obstruction. The abdomen was distended and there was visible peristalsis No tumour could be felt anywhere.	On June 22nd, 1902, the abdomen was opened in the middle line. The intestines were distended and there was well-marked peristalsis in the colon. A narrow ring of growth was found in the middle of the colon. Three inches of colon were removed. End-to-end union was effected.	The patient appeared to go on well for three days, but became worse on the sixth day; the stitching had evidently given way. The abdomen was reopened and death occurred four hours later.	I was asked to see the case with Dr. J. Stewart of Leeds but had to go away two days after the operation. As I was away from Leeds Mr. Walter Thompson kindly saw the case and did the second operation. The parts had entirely separated.
12	M.	65	Large mass involving the cæcum and the ascending colon.	The patient was apparently quite well until two months before the operation. There was some constipation but no obstruction. The patient had got a little thinner. He was working until a few days before the operation.	There was a big mass in the cæcum and ascending colon which could easily be seen and felt, but no obstruction. The patient's general state of health was good.	On Sept. 22nd, 1902, the mass was removed. The divided ends could not be brought into apposition. Anastomosis of the ileum and sigmoid flexure was effected.	Death six days after the operation. The patient became suddenly collapsed two days after operation but improved for a time with saline infusions and strychnia.	The patient was sent to me by Dr. W. L. Hunter of Pudsey. The mass was an enormous growth which had infiltrated the mesentery quite up to its attachment to the abdominal wall. It was attached by inflammatory adhesions to the pylorus and gall-bladder.
13	F.	50	Malignant stricture in the sigmoid flexure.	For two years the patient had been suffering from constipation. Complete obstruction occurred about a week before.	There were well-marked signs of complete intestinal obstruction. The abdomen was greatly distended. There was well-marked visible peristalsis. Vomiting and rapid pulse were present. No tumour could be felt anywhere.	On June 9th, 1899, the abdomen was opened in the middle line. Constricting growth was found in the sigmoid flexure. Another incision was made in the left anterior lumbar region and a loop of bowel with the growth was withdrawn outside and fixed to the incision. The intestine was opened above and drained. A week later the loop of bowel was removed without anæsthetic.	A good recovery and the patient was up and walking about on July 17th. She was well three years after and is, I believe, still living and well.	The case was seen with Dr. G. W. Thompson of Scarborough. There was too much obstruction to think of doing a primary enterectomy. The patient has never cared to have the continuity of the bowel restored, the opening having been quite comfortable.
14	F.	64	Malignant stricture of the sigmoid flexure.	The patient had been suffering from constipation and indigestion since April, 1901, and was taking an aperient daily. Acute obstruction commenced on Sept. 30th, 1901.	The patient was extremely ill with complete obstruction. The abdomen was greatly distended. There were well marked visible peristalsis and distension. Vomiting and rapid pulse were present	On Oct. 5th, 1901, a similar operation was performed to that in Case 13. The second operation was performed on Oct. 25th. The patient was very collapsed after the first operation and stood the second operation badly.	A good recovery ultimately and the patient now appears to be fairly well and without any signs of secondary growth.	The case was seen with Dr. J. McCracken of Coxwold.

paper I have only done colectomy on two others. Both cases were malignant disease of the sigmoid flexure and at the time of the operation had well-marked intestinal obstruction. In the one case a Murphy's button was used and in the other case a bone bobbin; the real cause of the failure was not in the apparatus used, but was due to obstruction present at the time of the operation with fæcal toxæmia. Both patients died. Since then I have adopted the method of which I gave a short account in a paper on intestinal suture which I read before the Leeds and West Riding Medico-Chirurgical Society in October, 1900,[3] and which I now wish to describe more in detail, after which I will refer to the cases of colectomy performed by this method.

OPERATION.

The abdomen having been opened by an incision most suitable for the site of the new growth, if possible the loop of the colon involved in the growth is withdrawn and clamped a good distance above and below the growth (Fig. 1).

FIG. 1.



a, Colon and mesocolon clamped with Doyen's forceps, the blades protected with rubber tubing. b, Divided ends of colon. c, Continuous stitch for mucous membrane. d, Continuous stitch for sero-muscular coats e, Gap in mesentery. , Ligature to unite opposing parts of cut mesenteric edge.

I know of no better clamps than Doyen's pedicle clamps, the blades of which are protected by pieces of india-rubber tubing. The bowel is now divided with a strong pair of scissors and the portion containing the growth, together with a corresponding portion of mesentery with its lymphatics, is removed; the cut ends of the bowel are protected with antiseptic gauze and the vessels in the mesentery, which have been secured with forceps, are ligatured. The divided portion is now thoroughly cleansed with some antiseptic solution. I now remove a circular portion of mucous membrane about from one-eighth to one-quarter of an inch in breadth from both divided ends in order to have a good broad surface of the other coats to bring into apposition. For suturing I prefer a small curved Hagedorn's needle, the eye part of which is no broader than the other portion of the needle; this I use on the flat. Suturing is now commenced, beginning at both cut edges at the mesenteric attachment and the sero-muscular coats are united for half the circumference by means of thin chromic or formaline gut (000). The mucous membrane is now sutured around the whole circumference with the same material, the suture being interrupted by knotting at two or three points; now the remaining half of the sero-muscular coats is united by means of the first suture interrupted by knotting at two or three points of the circumference, so as to prevent the continuous stitch from making the lumen too narrow. The clamps are now removed and the opening in the mesentery is closed; this I do by including opposite points of the gap in the same catgut ligature, three or four ligatures of this kind being generally sufficient to close the opening. This procedure prevents the possibility of perforating a mesenteric vessel which sometimes occurs when a needle and gut are used to suture the cut edges of the mesentery. If possible, the parts operated on are now surrounded with omentum and the abdomen is closed without drainage. The actual suturing can be done in from 10 to 15 minutes. For the last three or four years I have used catgut exclusively for intestinal suture and other abdominal operations—e g., ovariotomy, hysterectomy, &c. If one cannot bring the parts into sufficiently close apposition to secure an end-to-end union then the cut ends of the bowel should be closed by suture and a lateral anastomosis made; this was done in Case 12

If there is complete obstruction, the exact position of which cannot be ascertained, then I prefer opening the abdomen near the middle line, just making an incision long enough to admit the hand and arm, so that there is no escape of the intestines which, if it occurs, is certainly a factor militating against a successful result. With a little practice the hand soon becomes familiar with the feeling of being surrounded by distended bowels and a careful search is made in the usual sites in which malignant disease is most commonly found; beginning at the top of the rectum and working round to the cæcum the malignant growth will in this way be felt. It is best to make the search in this order, for it is in these positions that the malignant growths are less obvious than in the first part of the colon, where the growth can more usually be discovered without making an exploratory incision. Often the bowel is collapsed below the stricture; sometimes it is distended especially if enemata have been given. Having found the growth then the liver is examined to find out if any secondary deposits are present there or elsewhere in the abdomen, for if any secondary deposits are present it will be of no use to make any attempt later to remove the malignant mass. If the patient recovers from the preliminary colotomy and there are no contra-indications, as soon as it is thought that the patient will stand the second operation this is performed in the way just described. I did this in three cases, the patients in two of which (Cases 5 and 7) recovered.

There is another alternative to this plan and that is to withdraw the loop of the bowel with the growth, to fix it in the wound, and subsequently to remove it. This I did in two cases (Cases 13 and 14) in which there was complete obstruction at the time of operation, the obstruction being a small ring of growth in the sigmoid flexure in both cases. The abdomen was first opened in the middle line and the site of the obstruction being discovered another incision was made as for a left anterior lumbar colotomy; a loop of the sigmoid flexure with the growth was withdrawn through the opening and fixed in the wound. The anterior abdominal wound was now closed, the bowel was opened above the growth, and the intestinal contents were drained off by means of a Paul's tube About a fortnight later the portion of bowel and growth were removed without an anæsthetic and both patients made a good recovery and are now living. The first patient (Case 13) was operated on in June, 1899, with Dr. G. W. Thompson of Scarborough, and the second (Case 14) in October, 1901, with Dr. J. McCracken of Coxwold.

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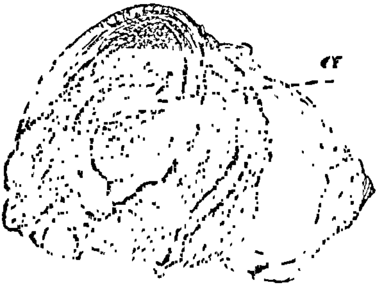
[3] THE LANCET, June 29th, 1901, p. 1817.

Of the six successful cases of primary colectomy, with end-to-end union, there was practically no obstruction at the time of the operation; of the two fatal cases in Case 10 the malignant stricture in the transverse colon was only discovered and colectomy performed after a very adherent cyst had been removed; the patient, a woman, aged 60 years, was not in a fit condition to stand the dual operation. In Case 11 there was obstruction at the time of the operation; the obstruction appeared to have only produced distension of the colon, the muscular walls of which were apparently in good condition and actively moving. As this was the condition I hoped that I might have succeeded. In this case the better plan would have been to withdraw the loop of sigmoid flexure through an anterior lumbar opening and to treat the case as I did Cases 13 and 14. Although these cases have both permanent colotomy openings they are really very comfortable. I wish to call special attention to Case 4 as it is the earliest condition of malignant disease of the colon which I have had a chance of operating on. After a consultation with Mr. Teale we recommended the patient to submit to an exploratory operation, as we suspected he must have a malignant growth somewhere in the colon. Mr. Michael Teale has kindly made a drawing (Fig. 2) of the portion of bowel removed (I have also to thank him for the other drawing illustrating this paper). It will be seen from this that the growth is of about the size of a florin; it was situated near the mesenteric border and apparently produced the obstruction by tilting on itself, so that the free portion closed the whole lumen and may even have caused a slight intussusception. In the colectomies performed after a preliminary typhlotomy two patients recovered (Cases 5 and 9) and one (Case 8) was fatal, although the patient's condition had greatly improved. At the time of the second operation I believe that a more satisfactory result might have been obtained had I waited for a few weeks longer. Case 12 was a very extensive operation for a man aged 65 years. Cases 13 and 14, considering that they were both operated on during the acute stage of obstruction, are very satisfactory and instructive cases.

FIG. 2.



Portion of bowel from Case 4. *a*, Growth from mesenteric border projecting into the lumen of the bowel.

If the growth is not removeable, or there are secondary growths in addition, then in some cases a lateral anastomosis can be performed; this I did in one case sent me by the late Dr. J. Muncaster of Halifax. The patient was completely relieved of the obstruction and died a few weeks later from extension of the growth. In another case, sent me by Mr. J. W. Roberts of Knayton, I did not do much good; a fæcal fistula formed and the patient died a few weeks after the operation.

In some cases of obstruction, when it is impossible to remove the growth or the presence of secondary deposits makes it inadvisable, a permanent colotomy or typhlotomy can be performed. This I have done several times. In some cases life is prolonged in comparative comfort; other patients are so ill at the time that we see them that typhlotomy is the only thing to be thought of and that sometimes without an anæsthetic. Most of these cases terminate fatally in a few days or weeks from the time of the operation, but sometimes we meet with more encouragement. In a case I operated on with Dr. J. Stewart of Batley, in June, 1901, the patient, a man aged 70 years, had intestinal obstruction due to a constricting malignant mass in the lower part of the sigmoid flexure; it was fixed and I thought it was not a suitable case for removal An anterior lumbar colotomy was performed. The patient is now in very good health and goes down to business every day. Many surgeons can now show examples of excellent results in this field of work, amongst others the papers of Mr. F. M. Caird and Mr. A. E. Barker are valuable contributions to this difficult subject. To study one's cases helps to clear one's views. "It happily so comes to pass that the more clear views we possess, the more do we learn to respect those that are as yet still vague."

In conclusion, I wish to thank the resident surgical officers, my house surgeons, and others who have at all times so kindly helped me, both at the operations and during the after treatment of the cases.

Leeds.

ON PERITOMY FOR DIFFUSE CORNEITIS AND OTHER AFFECTIONS OF THE CORNEA.

BY SIMEON SNELL, F.R.C.S. EDIN.,
OPHTHALMIC SURGEON TO THE ROYAL INFIRMARY, SHEFFIELD;
PROFESSOR OF OPHTHALMOLOGY, UNIVERSITY COLLEGE,
SHEFFIELD.

PERITOMY, or syndectomy as it was sometimes called, was introduced by Dr. Furnari of Paris. He described the operation in the *Gazette Médicale*, 1862. He had, 20 years before this, operated upon some natives of Algiers and had since then repeated the operation in more than 100 cases. Furnari's operation was a much more severe one than is advocated in this article. It has been described as follows: "The patient sits during the operation and the eyelids are kept apart with a speculum. Commencing his incision near the outer canthus Dr. Furnari excised a broad ring of the ocular conjunctiva, extending from the margin of the cornea to within three millimetres (about one-eighth of an inch) of the line where the conjunctiva is reflected from the globe to the inner surface of the eyelids. Symblepharon might ensue if more was taken away. For the purpose of fixing and turning the eyeball during the operation, a flap of conjunctiva is left at the upper margin of the cornea; this is removed last. The subconjunctival tissue must be carefully dissected off so as to expose the surface of the sclera. No trace of cellular tissue or of blood-vessels should be left; any which escape the scissors are to be caught and cut with the sharp hook. The vessels upon the cornea are freely scarified and their ends, if projecting, cut off with scissors."[1] After the subsidence of the bleeding Furnari touched the exposed sclera and ulcerated portions of the cornea with caustic, the vascular only lightly and the transparent portions not at all. The nitrate of silver he applied with a brush which had just before been rubbed upon the solid stick. Furnari stated that a strong irritation but no inflammation followed the operation; the abundant local bleeding apparently acted antiphlogistically. He regarded the operation as indicated in the following conditions: "(1) In the membranous and fleshy pannus; (2) in phlebectasiæ of the conjunctiva and cornea; (3) in simple vascular keratoiditis; (4) in partial vascularities of the cornea; (5) in interlamellar infiltrations of blood or lymph; (6) in corneal lesions resulting from entropium, ectropium, and trichiasis; (7) in staphylomatous conditions of the cornea, consecutive to softening of the latter."[2]

The operation, however, was apparently used chiefly, if not entirely, for the pannus associated with granular lids. Bader in 1863 wrote an article advocating its use in which he spoke of having performed the operation several times, the only untoward results being in those instances in which he had followed Furnari's advice and cauterised the sclera. It appears, moreover, to have been used also a good deal at that time by the various surgeons attached to the Moorfields Hospital. I practised it myself in several cases in my early days for pannus associated with granular lids but never with the added cauterising. The operation, however, fell into disuse for this particular kind of pannus and rightly so, for it merely attacked the corneal affection, which was a secondary one, and left the trachoma untouched. Very properly it has been held that by treating the eyelids by expression or other methods the pannus will clear up as improvement takes place in the trachoma. At the most, therefore, it can only be expected to be of service when associated with other means dealing more directly with the granular lids. Peritomy was revived by the late Mr. H. Bendalack Hewetson. At the annual meeting of the British Medical Association held in Leeds in 1889 he advocated its use in diffuse corneitis and then performed the operation at the Leeds Infirmary on several patients. It is particularly in this form of corneitis that I have myself employed peritomy and in which I wish now to urge its advantages. I have used it extensively during the last four years.

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[1] Bader: Royal London Ophthalmic Reports, vol. iv., p. 29.
[2] Ibid.

The only recent paper with which I am acquainted advocating peritomy is one read by Mr. T. Pridgin Teale before the Ophthalmological Society in 1901 in which he recommended its use in a variety of conditions—viz., episcleritis, iritis, herpes ophthalmicus, and purulent ophthalmia.

I will now describe my own experience in regard to the operation and the class of cases for which I have performed it. With regard to the operation a general anæsthetic may be given, and indeed it is sometimes required, but in the majority of my instances I have used cocaine. The operation is a brief one and if the cocaine is freely instilled it is usually sufficient. In addition, however, I use adrenalin, instilling it two or three times before commencing the operation. This affords the very great advantages of allowing the operation usually to be a bloodless one, or nearly so, and also the adrenalin seems to increase the anæsthetic effect of the cocaine. A speculum is then inserted and the patient desired to look downwards; a fold of the conjunctiva just beyond the cornea at the upper part is seized with forceps and is then snipped with curved scissors. From this point the conjunctiva is severed all round the cornea at a distance of from two to three millimetres. The portion left adhering to the cornea is next dissected up and removed with scissors. The division of the conjunctiva around the cornea is facilitated by using a pair of scissors having one blade somewhat longer than the other and ending in a bulbed extremity which readily runs underneath the conjunctiva. Recovery is usually quick from the operation, especially in young subjects. For a few days a rim of bare sclerotic is visible, but after the lapse of a very short time there is little indication of any operation having been performed. In a few cases I have performed a partial peritomy opposite any particular portion of the cornea which it was specially desired to affect. This will be further mentioned when I refer to the cases. I have performed peritomy in about 100 cases of diffuse corneitis and my experience has taught me that it is a remedy of particular value. Employed at the earliest stages it, in some instances, seems almost to abort the disease, whilst in others it undoubtedly very materially shortens the long period that such cases usually last. The beneficial effects are often quickly seen in those instances of corneitis which soon show the characteristic salmon-tinted vascularity, particularly at one border of the cornea. For a case in which the salmon-tint vascularity was situated at the upper part of the cornea I did a partial peritomy above. The effect was undoubtedly good, but when the other eye commenced in a similar position I performed a complete peritomy with, I believe, greater advantage. I have seen no evil results from the operation and therefore I should always advocate the complete and not a partial operation. When both eyes are affected I frequently operate on both at the same time.

The results of peritomy in cases of double keratitis have been very satisfactory even when the disease has already been going on for several weeks. I am disposed to think, also, that the cornea recovers its transparency more completely in those cases which have been peritomised than in those in which other methods have been adopted, and thus there is less likelihood of corneal opacities, or should they result they will be less dense than if peritomy had not been performed. For several instances of chronic ulcer of the cornea I have employed peritomy. In one case the benefit was very marked. A man for many years had chronic ulcers, small leashes of vessels running across the cornea to the ulcers. Sometimes he was better, sometimes worse, but the condition had continued for some years. In each eye peritomy was performed with distinct benefit and he was speedily better than he had been for several years. In ulcers, also, which show a tendency to recur peritomy has been done with advantage. A large ulcer on the cornea, to which a leash of vessels ran, was treated with some benefit with the ordinary methods, including the use of the cautery, but still it did not heal. A partial peritomy was done, the conjunctiva being severed and the corneal portion removed corresponding to about from one-third to one-half of the cornea opposite which the ulcer had been situated. The ulcer quickly healed.

Another variety of ulcer of the cornea for which I have performed peritomy with advantage is that superficial kind which occurs in people of middle age and which may spread so much as ultimately to involve the whole of the cornea. Such a case happened last year in a lady, aged about 60 years, in whom an ulcer of this nature began at one edge of the cornea and spread until a superficial ulceration involved practically the whole of it. It was attended with very severe pain and effectually resisted the ordinary applications. Any direct treatment, such as the application of the cautery, was refused by the patient. After six weeks of continuous suffering consent was at last obtained to put her under ether and to perform peritomy. This was accordingly done, and at the same time the ulcerated surface was in some places lightly touched with the cautery. Improvement was immediate and at the end of a week she talked of returning to Scotland and ultimately did so in about ten days. Another class of case in which peritomy may be used with advantage is that which is described as detachment of corneal epithelium. In such an instance which had been continuous for three months I did a peritomy recently with marked success. In my opinion we possess in peritomy a most useful means of treating diffuse corneitis and that in many other corneal affections it is a remedy of great value. In a recent instance of relapsing iritis in a young man peritomy rendered excellent service. I have used it with benefit in other cases, too, of iritis and corneo-iritis.

Sheffield.

THE THERAPEUTIC VALUE OF ALTERNATING CURRENTS APPLIED TO THE ABDOMINAL SYMPATHETIC NERVOUS SYSTEM.[1]

BY SAMUEL SLOAN, M.D. GLASG.,
CONSULTING PHYSICIAN TO THE GLASGOW MATERNITY HOSPITAL AND TO THE GLASGOW SAMARITAN HOSPITAL FOR DISEASES OF WOMEN, ETC.

IN using the term "alternating currents" I am restricting myself to the secondary faradic current and the magneto-electric or sinusoidal; the alternations of high-frequency currents being more properly described as oscillating I shall speak of the former as "alternating" and the latter as "high frequency."

In electro-therapeutics—I may add in general therapeutics—this is the age of electric currents of high potential and high frequency, so much so that currents of comparatively low potential and relatively low frequency are apt to be ignored if not despised. The latter do not appeal to the operator or to the patient as the former do, with their wonderful stage effects, their frequent startling cures, or their fascinating elements of scientific dash. After a year's experience of the high-frequency currents, whilst sanguine as to the future as well as satisfied with the present, I am coming to the conclusion that the success of former days before the advent of high-frequency was at least as real as we can get from the latter. Moreover, the former methods have, in my hands, succeeded where the latter have failed, whilst the high-frequency currents have failed in some cases when a return to the former methods has been followed by gratifying results. Possibly the greater experience of the older electro-therapeutic resources may account for this, "the best administered" being often the best.

These thoughts have led me to review my experience of work in this direction extending over seven years and to bring the results before the members of the British Electro-Therapeutic Society. This work has been faithfully recorded and, as far as possible, scientifically carried out. Thus only can we look for progress and thus only will our work differ from that of the honest charlatan who can often legitimately boast of his success in cases where "the faculty" had failed. He naturally ignores his failures, however, whilst we record them—our aims, let us hope, being nobler than his. Again, if I can add to the testimony in favour of the older methods I may be the means of helping to make the practice of electro-therapeutics more general, because the apparatus can more easily be in the hands of the general practitioner than the more elaborate and more expensive high-frequency installation. I believe —and I speak from a fairly extensive experience—that in the great majority of cases, within certain limits, of course, the kind of electric energy employed is of comparatively little consequence, if only the dose be carefully measured and regulated to suit the nature of the case; and this will differ greatly according to the form of electric energy employed. Thus failure in electro-therapeutics often means maladministration; and this fact should be impressed on the general practitioner who has a curious suspicion of this treatment equalled only by his readiness to recommend that it be tried when he has come to the end of his own resources, leaving his patient usually to find out for himself how to employ the new remedy.

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[1] A paper read at a meeting of the British Electro Therapeutic Society on April 24th, 1903.

The number of cases on which this paper is based is 67 and the ailments for which the treatment has been used have been atonic dyspepsia, visceral neuroses, neuro-muscular asthenia, asthma, lumbo-pelvic neuritis, persistent sickness with or without diarrhœa, peripheral vaso-motor disturbances (paretic or spasmodic), neurasthenia, uterine atony, and angina pectoris. Amongst the causes or accompanying conditions of these ailments have been the following: actively septic teeth, septic endometritis, influenza, chronic alcoholism, gastric catarrh, intestinal sepsis, epilepsy, obesity, inflammation of the uterus or of the uterine appendages, and anæmia.

It may be asked on what principle this treatment was carried out for so varied a list of affections. To that I can only say—and it may seem an unscientific reason—that it was because I had come to the conclusion from my extensive experience of faradisation of the brain that the electricity acted, when judiciously administered, as a stimulant and tonic to nerve tissue, improving its nutrition, and that, knowing little, if anything, of the pathology of the sympathetic system, but knowing how intimately any disorder there must influence the abdominal viscera and the general circulation, it seemed reasonable, if I could ascertain no cause for the disorder or could not for any reason remove that cause, that whatever improved the tone of the nervous mechanism must improve the patient. This improvement would be temporary if the cause persisted and more or less permanent if the cause were already in abeyance or could be previously removed; and this is exactly how matters have turned out. In practically all the cases drugs had been previously given and all the usual resources of the medical art had been exhausted, whilst during the electric treatment nothing was done, as a rule, which could render the cause of the result doubtful.

Leaving out of consideration the cases in which the treatment was applied once or twice, since no deduction could be drawn from these as to the efficacy of the treatment, as well as those in which the result was doubtful or was not known, and those of my early cases when I had no instrument for measuring the currents, there remain 57 cases. Out of this number there have been 46 cases of complete recovery, or of such a satisfactory result as an efficient holiday would give in favourable circumstances; that is, not what sometimes results from the action of drugs, which result ceases when the administration ceases, but a lasting beneficial effect after cessation of the treatment which brought about the improvement. Where the treatment has been adopted in only one or in a few cases of any particular ailment little can be said of its efficacy in other cases of the same disease or disorder. The oftener this occurs, however, the more reasonable will my contention be regarding the theory of action of this treatment, and even single instances of trial of the treatment if faithfully recorded and collated will at least help towards a correct selection of the cases and assist in bringing about an increase of successes and a decrease of failures.

My failures have been in all 11 and therefore my percentage of successes amounts to 80 when those of doubtful or unrecorded results are omitted. In some of these omissions I have stated that I have left them out because at the time of treatment I had no instrument to measure the current, such an instrument being a *sine quâ non* if the treatment is to be carried out on scientific lines. Some are too recent for me to be able [illegible] the treatment. In others, again, [illegible] in the mind of the patient, been [illegible]ly one or two applications had been employed I have left them out, lest the result might have been a mere coincidence or have followed mainly as a result of suggestion. The accompanying table will show what I mean and what I claim for this treatment:—

TABLE SHOWING THE RESULTS OF ALTERNATING CURRENTS APPLIED IN 67 CASES.

Diseases or disorders.	No. of cases.	Causes or accompanying conditions.										Results.		
		Actively septic teeth.	Septic endometritis.	Influenza.	Chronic alcoholism.	Gastric catarrh.	Intestinal sepsis.	Epilepsy.	Obesity.	Inflammation of uterus or of uterine appendages.	Anæmia.	Successes.	Uncertain.	Failures.
Atonic dyspepsia	6	—	—	1	—	1	—	—	1	1	1	3	2	1
Visceral neuroses	19	—	3	1	2	1	—	—	—	1	1	12	4	3
Neuro-muscular asthenia	17	2	4	2	—	—	—	1	1	2	—	15	1	1
Asthma	1	—	—	—	—	—	—	—	—	—	—	1	—	—
Lumbo-pelvic neuritis	7	—	—	2	—	—	—	1	1	1	—	3	2	2
Persistent sickness with or without diarrhœa ...	6	—	—	1	1	—	1	—	—	—	—	5	—	1
Peripheral vaso motor disturbances—paretic or spasmodic	5	—	2	—	—	—	—	—	—	—	—	5	—	—
Neurasthenia	2	—	—	—	—	—	—	—	—	—	—	—	—	2
Uterine atony	2	—	1	—	—	—	—	—	—	—	—	1	1	—
Angina pectoris	2	—	—	—	—	—	—	—	—	—	—	1	—	1
Total	67	2	10	7	3	2	1	2	3	5	2	46	10	11

The result of the treatment at the time, especially in very chronic cases, often seemed to me and to my patient unsatisfactory. However, one or more months after and without further treatment, the *vis medicatrix naturæ* having evidently received the necessary fillip from the treatment, the patient is usually gratified by the change in health which may come gradually and as a pleasing surprise after a temporary disappointment.

These results speak for themselves. I have not strained the record so as to make it tell. Rather have I sometimes placed in the list of uncertainties cases that I might have legitimately put amongst the successes. I have endeavoured to be impartial, though you know how difficult it is to refrain from trying to make "a big show." The results are gratifying.

If there is any other treatment which in difficult and chronic cases would give better results I have yet to learn of it.

With reference to the list of diseases or disorders in the table, it must not be concluded that an affection has been defined when it is labeled. The classification, however, is, though not strictly correct, sufficient for practical definition, though some of the cases I had a difficulty in classifying. In the case of the causes or accompanying conditions these were not always simple but often complex; I have, however, endeavoured to classify them as they impressed me at the time.

The following impressions, confirmed by a study of the table, of the kind of case which benefits and the kind in which the treatment is likely to fail may be taken as fairly accurate.

1. Those cases of uncomplicated neuro-muscular asthenia where the cause had ceased or had been removed have proved most amenable to the treatment. By neuro-muscular asthenia I mean neurasthenia minus its psychic elements. 2. Regarding cases of visceral neuroses almost as much can be said. 3. Cases of persistent sickness, some of them of reflex character, have done well under the treatment, the only failure in this list having been one in which the liver was considerably enlarged. 4. The treatment may be relied upon in vaso-motor cases, all of the five cases having been successful. 5. The treatment will be of little avail in neurasthenia. I suspect its only chance here would be after the Weir-Mitchell treatment of it had failed. 6. In cases where inflammatory mischief existed in the pelvic organs the result is not likely to be good. In such cases vaginal electric applications have given the best results. 7. Where septic endometritis exists only a very temporary improvement will follow, although this may be made a permanent one if the treatment is resorted to after curettage has removed the septic condition from the uterus. 8. Epileptics are likely to derive no benefit from the treatment. I had two cases of angina with no apparent evidence of organic disease. As the table shows, recovery ensued in one, but the treatment in the other appeared to have no influence or rather seemed to make the symptoms worse. Perhaps in the successful case the success was due to the anterior electrode having been placed during part of the treatment over the cardiac region and in the case of failure I suspect the dose given was too large. This patient had a somewhat alarming collapse during one of the applications.

The title of my paper shows that these favourable results, where such has been the case, have, in my opinion, arisen from the action of the currents on the sympathetic system of the abdomen. You may, therefore, expect me to say why I think this has been so.

1. There are anatomical reasons, the electrodes, as I shall afterwards explain, being placed one behind the origins of the splanchnic nerves and the other in front of the prevertebral plexuses of nerve fibres and ganglionic cells of the abdominal sympathetic system.

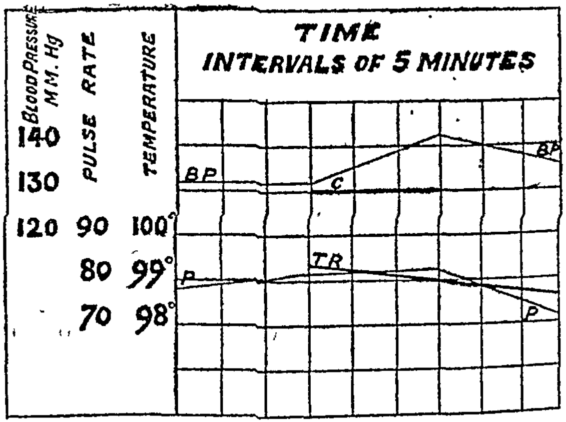
2. Whilst Professor d'Arsonval points out that no influence is made on nerves by currents having a frequency of over 5000 alternations per second, it must be otherwise with these currents we are now considering, since they have as low a frequency as about 40 per second. Here the fibres and cells of the nerve are probably influenced by something of the nature of rhythmic molecular massage or by vibrations of such frequency as they can respond to.

3. Whereas in high-frequency currents the main influence of the currents is on the skin, with these we are considering the easiest path is by the soft deeper tracks.

4. Whilst, as I have elsewhere pointed out, in faradisation of the head even therapeutic doses cause more or less psychic phenomena, showing that there is faradisation of the brain as well as of the scalp, the effect on the other hand of dorso-abdominal faradisation is to produce exactly what physiologists point out as caused by stimulation of the sympathetic system—namely, exhaustion, for after almost every application of the current there follows decided, often great, sometimes profound, exhaustion. This, however, I have noticed, is within—it must be—certain limits a favourable sign if followed by a sufficient rest, for after a proper amount of rest there follows the opposite condition of a comfortable sense of vigour and well-being, but only when the rest obtained is proportioned to the exhaustion felt. I may add here that I have never known a patient in the least degree afterwards the worse for this treatment. Query: Is this constant after-exhaustion not due to sudden absorption of toxins from the alimentary canal, caused by stimulation of absorbing power due to stimulation of the ganglia of the sympathetic system? The fact that this period of exhaustion and its amount diminish as the case favourably progresses may be due to the amount of toxins diminishing by improved nutrition of the digestive organs, for the dose of the current is generally increased later in the course of the treatment and then with generally slight fatigue only.

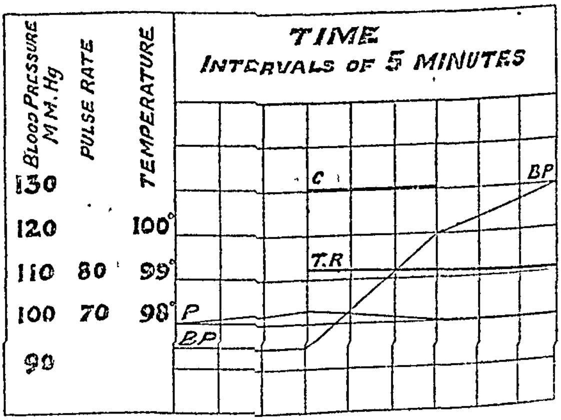
5. I have made some experiments on blood pressure, pulse, and temperatures before and after the applications, taking care to employ control tests at the same time. These show a practically constant rise of from five to 30 or more units in the blood pressure, without, as a rule, any change in the pulse-rate, but with a slight fall of the temperature in the mouth and in the rectum. If there is a fall of the pulse-rate there is less increase of the blood pressure, but still some. This shows that the rise of blood pressure is not due to an increase of cardiac rate, which is often rather considerably reduced, so I infer that it is due to a mild stimulation of the sympathetic system, causing a diminished relaxation of the arterioles of the splanchnic area. This, I take it, is also evidence in favour of the direct action of the current on the sympathetic ganglia, since a paresis of these ganglia causes, pathologists tell us, a congestion of the abdominal organs. I submit charts of two of the cases which will explain, perhaps, more clearly what results I obtained.

CHART 1.



B P, blood pressure. C, current, the amount being four milliampères. P, pulse. TR, temperature.

CHART 2.



B P, blood pressure. C, current, the amount being four milliampères. P, pulse. TR, temperature.

6. As a negative reason, I feel sure that the element of suggestion may be eliminated for the following reasons: (a) No rash promise is made to the patient beforehand; (b) the current is so weak, compared with the large size of the electrodes, that the patient often complains of getting nothing at all; (c) the after-exhaustion is certainly an argument against suggestion; (d) some of the experiments, especially two of them which were made on medical men, were on those little likely to be influenced by suggestion; and (e) there has been an absence of early or sudden

benefit; this having been rather slow and somewhat delayed, especially in finally successful cases.

I need not dwell much on the method of administering the currents. Two large moist clay electrodes, warmed, are applied. The one, about 9 inches by 6 inches, is placed, attached to the positive pole, between the shoulder-blades; the other, attached to the negative pole and measuring 9 inches by 10 inches, is placed over the abdomen, especially over the epigastric region. The current is from a secondary coil of about 8000 turns of fine wire and the dose is carefully measured by my faradimeter which I exhibited before the British Electro-Therapeutic Society in 1902.[2] When the sinusoidal current is used the alternations are about 1800 per minute, the voltage being much the same as that of the secondary coil. The dose at the first *séance* is from 2 to 3 milliampères. As the case progresses this is raised till a dose of 7 or at most 8 milliampères is administered. The *séance* lasts each time for 15 minutes. Should the coil have a larger number of turns on it than 8000 the current may be given in larger doses than those stated. If a smaller coil is used a smaller dose must be given. The patient, at the early sittings especially, should be made to rest for at least 15 minutes before going home and should then go to bed for an hour or longer, or recline for that time on a sofa. The applications are given every second, third, or fourth day; and the number which usually suffices is from six to eight. If a longer course seems to be required on account of the chronic nature of the complaint a gradually decreasing size of coil should be used and the former dose maintained.

The following few notes of three illustrative cases may prove interesting as a finish to my remarks.

CASE 1.—The patient was a single woman, aged about 40 years. Till a few years ago she had been a person of great mental capacity and with the normal amount of self-control. The abrupt news, however, of her mother's sudden death quite altered her nature and she gradually became a chronic alcoholic. When first attended by me two years [illegible] she volunteered the remark that she was less easily worried or fatigued and that she felt less craving for the brandy. Improvement was steady. The treatment, however, was kept up for several months, at intervals of about a week, at her own request, as she said that she was persuaded that if the treatment stopped the desire for alcohol would again become irresistible. Recently she informed me that for eight years she had had agonising pains every night for which she had always to remove her stays in the early part of the evening and that she had had no distress of this sort during the past year. The mere presence now of a lady companion suffices to enable her to maintain almost a normal amount of self-control.

CASE 2.—This case, though one probably of malignant tumour of the abdomen which has since ended fatally, was [illegible] this treatment. It was that [illegible] years, resident in the south of [illegible] of mine in Glasgow. When he came to me in August, 1901, I was shocked at the change in his appearance though I had heard that he was considered to be dying. His weight about four years previously had been 12 stones 5 pounds; it was at his first visit to me 7 stones 13 pounds. His principal complaints were of frequent and copious vomiting with constant diarrhœa, the motions being watery, slimy, and putrid. He had become exceedingly nervous and irritable, his natural temperament having been a placid and amiable one. The abdomen was full and tympanitic throughout, but no fluid could be detected nor was there any evidence of a tumour. As he had been frequently examined by various medical men and no evidence of organic disease had been detected I hoped that what was evidently mainly a paresis of the abdominal sympathetic system might be the primary and not the secondary condition. On this hypothesis I suggested electric treatment. He was so ill and the case seemed so hopeless that I proposed a fortnight's trial only of the treatment. Of the five medical men who had seen him no one had spoken of treatment by electricity. After six applications the improvement was so great that no question as to its beneficial influence had to be entertained. At the end of four weeks I note in the patient's own words as follows: "Decided improvement, don't feel the same at all as I was when I first came to you." I sent him now to Yorkshire for a change from city life. During that month he was only once sick and that was after eating cheese and he had gained half a stone in weight. The electric treatment was resumed and continued for two months. He then went home feeling better than for two years. Six weeks later he wrote as follows "My improvement is still maintained. I feel better than I have been for the last four years." During the following summer he gradually lost in health; fluid was detected in the abdominal cavity and the suspicion of tumour, though never confirmed, seemed to have been strong in the mind of his medical attendant. He died in October, 1902. There was no post-mortem examination.

CASE 3.—This patient was married and was about 30 years of age. She was of good constitution, though with slight glycosuria during her pregnancies. During the summer of 1901 she had an attack of influenza when in London. Severe neuro-muscular asthenia supervened and in spite of medicinal treatment by several medical men and a residence in Homburg during the autumn this condition persisted till the following April when I decided to stop all medicinal treatment, which seemed only to upset her, and to try dorso-abdominal faradisation. The first dose was 3 milliampères, the patient being quite unconscious of the presence of the current. Severe fatigue followed, lasting for 36 hours. The dose at the next visit was reduced to 2 milliampères and little fatigue followed. Gradually the quantity was increased up to 5 milliampères. No fatigue whatever followed. Three weeks from the first application the note is: "Less depressed, digestion perfect, in every way much better." She became pregnant in June following, passed through the period of pregnancy in excellent health, was confined recently, and has made a perfect and an unusually quick recovery. She informed me a few days ago that she had had no return of the nervous exhaustion.

Glasgow.

SUCCESSFUL REMOVAL OF MORE THAN THREE-QUARTERS OF THE STOMACH FOR CANCER, WITH GASTRO-JEJUNOSTOMY.

BY J. LYNN THOMAS, C.B., F.R.C.S. ENG.,
SURGEON TO THE CARDIFF INFIRMARY; CONSULTING SURGEON TO THE "HAMADRYAD" HOSPITAL, PORTH HOSPITAL, BRIDGEND HOSPITAL, AND CARDIFF PROVIDENT DISPENSARY.

DURING the year 1902 I opened the abdomen five times for carcinoma *of the stomach, prejudging from physical signs* that the growth was removeable, but in only one of my cases was it possible to do anything more than the palliative treatment of short-circuiting. In four of the cases, after inspecting the local growth, it was evident that conditions existed of which one had no detectable external physical *signs and which at once negatived the* projected removal of the growth; these unforeseen and unfortunate conditions were: (1) secondary growths in the liver, (2) infection of the glands in the transverse mesocolon and (3) along the vertebral column. As regards the symptoms which guide one in forming an opinion as to the practicability of the performance of a pylorectomy or of a partial gastrectomy, mobility of the growth is one of the most important and, as a rule, if one cannot shift the position of the gastric growth by distension of the stomach with air, it will be found upon exploration to be inoperable. The non-observance of this fact is one of the causes of failure in the performance of the operation. Weyman's syringe is perhaps the best instrument for inflating the stomach in order to demonstrate the mobility of a gastric growth and also of showing the size and shape of the stomach itself, but an ordinary small pair of bellows fixed on to a rubber stomach-tube answers the purpose equally well, as the surgeon has the air inlet valve under perfect control and can convert it into an outlet valve when necessary in a second by pushing a finger under it. The situation of a pyloric growth is very variable; it may be situated to the left of the middle line, in the middle line above,

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[2] THE LANCET, March 22nd, 1902, p. 830.

A Mirror
OF
HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

BRADFORD ROYAL INFIRMARY.

THREE CASES OF PERFORATED GASTRIC ULCER.

(Under the care of Dr. C. F. M. ALTHORP.)

CASE 1.—An unmarried woman, aged 23 years, was admitted to the Bradford Royal Infirmary under the care of Dr. C. F. M. Althorp on March 13th, 1902 For seven years she had had pain and vomiting after food. 32 hours before admission, whilst at work, the patient was suddenly seized with acute pain in the abdomen followed by symptoms of collapse. When she was seen at the infirmary the pulse was 102 and the temperature was normal. She complained of abdominal pain. The abdomen was distended, with rigid walls, and the liver dulness was absent. Perforated gastric ulcer was diagnosed and without delay the abdomen was opened in the middle line above the umbilicus. Gas escaped on opening the peritoneal cavity and lymph was seen on the anterior and upper walls of the stomach. Old adhesions fixed the stomach and great difficulty was experienced in obtaining a view of the perforation, which was of about the size of a threepenny piece and was situated in the centre of a large ulcer near the cardiac end of the stomach. A large collection of escaped contents of the stomach had already formed a perigastric abscess. Owing to the position of the perforation and because the stomach was fixed by adhesions it appeared impossible to close the opening by stitches. Several silk sutures were introduced, but they tore out on an attempt being made to tie them. It was therefore decided to trust to gauze packing, especially since the general peritoneal cavity was cut off by recent adhesions. The infected area was mopped dry and gauze was packed around the perforation. The patient stood the operation well and appeared to progress nicely for ten days. The gauze packing was removed on the third day, the cavity was mopped dry, and fresh gauze was introduced daily. The discharge was extremely offensive. Rectal feeding was employed for nine days, then small quantities of peptonised milk were given by the mouth. On the tenth day the patient began to cough and she expectorated a small quantity of offensive pus. There were found to be signs of consolidation at the base of the left lung. An exploring needle introduced into the dull area withdrew a little pus. An anæsthetic was given and the left pleural cavity was explored. There was no pus in the pleura or collection below the diaphragm. The lung was solid. The patient died on the following day from pneumonia.

Necropsy.—The post-mortem examination revealed hourglass contraction of the stomach caused by a large ulcer in the centre of which was the perforation. Opposite to the ulcer there was an opening in the diaphragm and here the base of the lung was adherent. There were no empyema and no subdiaphragmatic abscess. The lower lobe of the left lung was solid and near the base was a small septic abscess.

CASE 2—On Jan. 23rd, 1903, a man, aged 23 years, whilst at work was suddenly attacked with severe abdominal pain followed by symptoms of collapse. Two months previously he had vomited a pint of blood and had since been under treatment for gastric symptoms. Eight hours after perforation he was seen at the Bradford Royal Infirmary. Being under the influence of morphia he had no pain; his pulse was 84 and the temperature was normal. Ether was given and on opening the abdomen gas escaped and contents of the stomach were seen spread over the anterior surface of the stomach. A large perforation was seen on the lesser curvature of the stomach near its cardiac end deep down under the arch of the diaphragm. Adhesions were forming between the stomach and liver and a line of lymph cut off the area of perforation in a downward direction. The perforation was the centre of a large ulcer which had by its contraction given rise to a condition of hour-glass stomach and had fixed the organ posteriorly by adhesions. The stomach could not be withdrawn into the abdominal wound. The stitching therefore had to be done within the abdomen. The stomach tissue around the perforation was extremely rotten and the stitches tore out. A Halstead suture of thick silk passed wide of the perforation drew the edges of the opening together. The area of the perforation and of the ulcer was further closed in by bringing together a fold of healthy stomach wall from each side by means of a row of interrupted silk sutures. A fold of omentum was stitched over the line of union The peritoneal cavity was washed out with hot saline fluid and the abdominal wound was closed without a drain. The after progress was very satisfactory, except that at the end of the first week an abscess formed in the left flank and required incision and drainage. This appeared to indicate that the left kidney pouch had not been efficiently washed out at the time of operation. Two months after the operation the patient was quite well and was taking ordinary light diet without discomfort.

CASE 3.—An unmarried woman, aged 27 years, was admitted into the Bradford Royal Infirmary on March 14th, 1902, with signs of a perforated gastric ulcer. For five years she had had symptoms of indigestion. The present attack came on in the street soon after a meal—there being severe pain in the abdomen and vomiting. When seen at the infirmary eight hours after the perforation there were abdominal pain and rigidity. The pulse was 112 and the temperature was normal. The abdomen was opened in the middle line and gas and contents of the stomach were at once noted. The extravasated fluid was mopped up both to the right and to the left, but no perforation was found on the anterior surface, the lesser curvature, or the cardiac end of the stomach. The transverse colon was drawn upwards, an opening was made in the transverse mesocolon, and the stomach was drawn out of the lesser sac on the surface of the abdomen. Very little fluid was present in the lesser sac. About the middle of the posterior surface of the stomach was an ulcer of the size of a sixpence and in the centre of this was a small rounded perforation. The opening was closed by two layers of silk sutures. The stomach was returned to the lesser sac and the opening in the transverse mesocolon was closed with a continuous catgut stitch. The pelvis and right kidney pouch were full of turbid contents of the stomach which were removed partly by mopping with sponges and also by flushing out with hot saline solution A glass drainage-tube was introduced into the pelvis through a suprapubic opening and the right kidney pouch was drained by means of a split rubber tube with a gauze wick inside. The abdominal wound was closed by silkworm-gut sutures passing through all the layers. The patient was very collapsed at the end of the operation and required hypodermic injections of strychnine and saline fluid by the rectum. On the fourth day the drainage-tubes were removed and at the end of a fortnight the patient was taking a fluid diet by the mouth. Some symptoms of lung complication appeared in the third week but they fortunately cleared up and she made a slow convalescence.

Remarks by Dr. ALTHORP.—In Cases 1 and 2 the perforations were in hour-glass stomachs caused by large ulcers near the cardiac end. In Case 1 it was found to be impossible to suture the opening, gauze packing being used; in Case 2 the perforation was closed with great difficulty and no drainage was employed. In both of these cases the stomach was fixed posteriorly and could not be drawn into the abdominal wound The perforation in Case 3 was in the posterior wall of the stomach, access being obtained through an opening in the transverse mesocolon.

Perforation of the posterior wall of the stomach is rare (9 per cent., Robson) and perhaps an easier way of getting access to the lesser sac in Case 3 would have been by tearing through the great omentum below the greater curvature of the stomach. The extravasated fluid had in this case passed out of the foramen of Winslow into the right kidney pouch and down into the pelvis and, in fact, had spread all over the peritoneal cavity. There was in consequence a good deal of shock. The presence of hour-glass contraction of the stomach in Cases 1 and 2 made the operation very difficult on account of the stomach being fixed and the out-of-the way position of the perforations. Drainage was employed in Cases 1 and 3. In Case 1, although the length of time between perforation and operation (32 hours) made the prognosis almost hopeless, the gauze drainage

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is one of the patient at the
time of operation. In Case 2 the cardiac compartment was very small and the stomach was so fixed behind that great difficulty would have been experienced in performing an anastomosis even had other circumstances been favourable.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

An Inquiry into the Phenomena attending Death from Drowning and the Means of Promoting Resuscitation in the Apparently Drowned.

A MEETING of this society was held on May 26th, Mr. ALFRED WILLETT, the President, being in the chair.

The PRESIDENT said that the committee for the investigation of the phenomena attending death from drowning had been appointed by the society in 1892. During the earlier part of the last century the method introduced by Dr. Marshall Hall for resuscitating the apparently drowned was that which was universally adopted, but towards the end of the "fifties" Dr. Silvester's method was advocated and it was thought to be more efficacious. A committee was formed for the investigation of the subject and reported in favour of Dr. Silvester's method in 1862 The method had since then been almost universally adopted, but there were those who had criticised, and still differed from, the results of the committee and it was therefore in 1892 that the society formed a fresh scientific committee further to investigate the subject and members would hear that night from Professor Schafer the report of that committee

Professor E A. SCHÄFER said that in considering the manner in which the question which was placed before the committee might best be solved it became clear that it would be necessary for the inquiry to be pursued along two different lines—the one having for its object the determination of the most efficient and most convenient mode or modes of carrying on artificial respiration in the human subject, and the other, the investigation of the physiological phenomena which attended asphyxia produced by the introduction of water in place of air into the lungs, as well as the phenomena which accompanied recovery in apparent death by drowning. This branch of the inquiry could, of course, only be conducted upon animals; and for various reasons dogs were by far the most suitable subjects upon which to carry out such an investigation. As was the case, therefore, with the report submitted by a previous committee of the society and published in the Transactions for 1862, the report consisted, so far as the experiments recorded were concerned, of two parts —one dealing with physiological experiments upon dogs and the other of experiments designed to measure the amount of air which could be taken into or forced out of the lungs in man by various methods of artificial respiration. Experiments to determine the amount of air which could be taken into or forced out from the lungs by various methods of artificial respiration were carried out by experiments of a similar character to those which were instituted by the 1862 committee, which made a number of observations upon the dead body with this object. But the method generally employed—that, namely, of tying a tube into the trachea, this tube being connected with a balanced bell-jar—was open to the obvious objection that no such operative procedure as this could well be used in cases of apparent drowning In such cases, moreover, there were factors connected with the

the pharynx and which also had been supposed to cause the epiglottis to fold over the superior aperture of the larynx. On these grounds it seemed to the committee of importance to determine, if possible, the question of the amount of air passed into and out of the lungs (under different methods and conditions of artificial respiration) with preservation of the natural channels through the nostrils and mouth. In order to effect this result the committee employed a face-piece or mask, with tubular rubber margin which could be fitted so as to be air-tight, with the aid of vaseline, over the mouth and nostrils, and this mask was connected either to a spirometer or to a balanced bell-jar similar to that used by the 1862 committee, with its mouth dipping under water, and so arranged that it would move up or down according as it contained more or less air. The difficulty of experimenting upon the dead body was, however, so great that it occurred to the committee that it might be feasible to carry out the inquiry upon the living subject, the conditions necessary being that the subject should remain completely passive without making any attempt at natural respiration for the short period of time during which the experiment might last, and that he should not, by involuntary closure of the glottis, prevent the free passage of air into, or out of, the lungs. The first of these conditions could be readily fulfilled if the subject, immediately prior to the experiment, made several deep respirations, for he thereby rendered himself temporarily apnœic and the *besoin de respirer* was absent. In these circumstances it was by no means difficult to perform artificial respiration for a short time without any resistance on the part of the subject and without his making any spontaneous movements of respiration. The second condition necessary for success—the maintaining an open glottis—was at first more difficult. The results of these experiments showed that by nearly every method used a greater volume than the normal tidal air entered the lungs The methods which might be employed in artificial respiration in man were of three kinds—viz.: (1) those in which air was drawn into the lungs by increasing the capacity of the thorax (which could only be done artificially by raising the ribs); (2) those by which air was forced out of the thorax by direct compression of its walls or indirectly by compression of the abdomen; and (3) those by which air was driven by means of a pump or bellows through the air passages into the lungs. It was obvious that both kinds of methods enumerated under

exerted upon the chest walls; this was, in fact, the method which was generally employed and was that recommended by Dr. Silvester. There was one serious danger to which the pressure methods were liable—viz, that of causing injury to the internal organs. The greatest danger was to the liver, which in all cases of drowning, and of asphyxia in general, was enormously congested and enlarged. In these circumstances a very little excess of pressure—especially if it were applied to the lower part of the chest or the abdomen—was sufficient to produce rupture of the liver with concomitant extravasation of blood into the peritoneal cavity. Some of the experiments upon dogs illustrated the reality of this danger, and it was not an unknown experience that in cases of death from an overdose of chloroform in the human subject, in which various methods of artificial respiration—and these often included forcible compression of the lower part of the thorax or of the abdomen—had been resorted to in attempts at resuscitation, it had been found post mortem that the peritoneal cavity contained a large effusion of blood, resulting from rupture of the liver. The methods of artificial respiration which had been tested were: (1) simple traction (and relaxation) by both arms, the subject being in the supine position; (2) traction by both arms with alternating pressure upon the thorax, supine position; (3) intermittent pressure on the thorax, supine position; (4) simple traction (and relaxation) of both arms, the subject being in the prone position; (5) traction by both arms with alternating pressure upon the back of the thorax, prone position: (6) intermittent pressure on the back of the
thorax, one arm only, the sub-
ject lyi with the opposite arm
underne ction by one arm with
alternating pressure upon the thorax, lateral position; (9) intermittent pressure on the thorax, lateral position; and (10) rolling the subject alternately from the lateral or latero-supine to the prone position with alternating pressure upon the back of the thorax. All the methods employed were competent to effect a sufficient exchange of air to maintain the oxygenation of the blood. Very few of the methods gave results less than the volume of the tidal air of the individual. The least amounts were those yielded by the traction method pure and simple,

but the combination of this with alternating pressure gave results which were in some instances much larger than, and in the others very nearly, if not quite, as large as, the amount of tidal air. The marked effect of pressure in assisting the output and subsequent elastic intake of air was particularly well seen in the case of the younger subjects, and this was doubtless due to the greater mobility in them of the thoracic walls. It further appeared that the prone position was advantageous in assisting the effects of pressure, probably because pressure applied to the back became more evenly distributed over the thorax and abdomen. It appeared to the committee that both this method and the even more simple method of rhythmic pressure upon the back with the subject placed in the prone position, should occupy a prominent place in all recommendations made with the view of the resuscitation of the apparently drowned. One of the most striking results shown in the series of experiments on dogs drowned in fresh water was that of the complete disappearance of the water which was taken into the lungs, even in cases in which artificial respiration was not followed by recovery. The actual amounts which were absorbed had been found to be very variable (from 75 to 690 cubic centimetres). This no doubt depended somewhat upon the size of the dog used, but it probably depended more upon the character of the respirations, especially those at the beginning of the immersion. Another striking fact which came out in these experiments was the great length of time during which immersion might last and yet be followed, with efficient artificial respiration, by complete recovery. Several of the experiments illustrated this point. In one case the immersion lasted nearly eight minutes without a fatal result. In other instances a much shorter immersion was followed by death in spite of artificial respiration, and even in two instances in spite of the fact that the natural respirations were recovered. The reason for the failure of recovery—when it was not due, as seemed to be the case in certain instances, to early complete failure of the heart—appeared to have been due to deficient aeration of the blood by the respiratory movements. The results with sea-water were, on the whole, similar in character to those with fresh water, but there were certain points of difference So far as these experiments went it would seem that there was, as a rule, less absorption of water by the lungs. This was, of course, to be expected, seeing that the osmotic force of sea-water was higher than that of the blood. Indeed, in one experiment this showed itself by the fact that a larger amount of fluid was returned from the air passages than had been taken in and the excess must have come either from the blood or from other fluids of the animal body. Since one of the most marked physiological symptoms of death by asphyxia from drowning—as in other forms of asphyxia—was the extreme lowering of blood pressure owing to paralysis of the vaso-motor system, it was hoped that such a drug as suprarenal extract might, by antagonising this symptom, produce, in association with artificial respiration, rapid recovery; the more so because this drug was known also to increase the force and rate of the heart's action. But it was obvious that it would only act if there were some sort of circulation going on to promote its absorption and to carry it to the peripheral vessels; and even then it could only produce permanent benefit if the artificial respirations were efficiently promoting the aeration of the blood, since as long as the venous condition of the blood continued the paralysis of the vessels and heart could not be more than quite temporarily relieved. This was, in fact, what was found to occur, for in cases in which, owing to froth in the bronchi, the diffusion of the oxygen of the inspired air into the alveoli was interfered with, or in which, from any other cause, the artificial respiration was inefficient, the result of intrapulmonary or intracardiac injection of adrenalin had only a quite temporary effect—the blood pressure rising and the pulse improving for a short time—to give place again to paralysis of vessels and heart and at the best only deferring the fatal result for a brief period.

Dr. H. R. SILVESTER said that he should confine his remarks to discussing the most convenient and efficient mode of carrying out artificial respiration. He regretted that the committee of inquiry had not used the same method for estimating the amount of air that could be introduced into the lungs as the committee of 1862, for he considered that no satisfactory results could be obtained by estimating the amount of air passing through the upper air passages, for some portion of the air would tend to find its way into the stomach and thus prevent any accurate comparison. Another serious objection to the face mask method was that air from the stomach was liable to pass into the spirometer. He thought that the rolling method had the additional disadvantage that the contents of the stomach were liable to get discharged into the pharynx and so into the air passages Dr. Silvester pointed out the importance while using traction to have the body on an inclined plane and even in some cases to tie the feet. He considered that the conclusions of the present committee were based on insufficient evidence

Dr. R. L. BOWLES said that the report of the present committee confirmed the report of the committee of 1862, which showed that sufficient air for the maintenance of life could be introduced by alternate compression and relaxation of the chest wall and by means of movements of the arms. The present committee had experienced the same difficulty in estimating the amount of air capable of being taken in and driven out of the thorax by artificial respiration in carrying out the experiments on the dead body as the committee of 1862, but by well working the muscles the rigor mortis of the body might be overcome and the chest could be rendered more or less elastic before beginning the experiment. He considered that the falling back of the tongue and the collection of mucus in the pharynx were the greatest hindrances to artificial respiration and that while the body was in the supine position these difficulties could not easily be overcome, whereas if the body were in the prone position neither of these difficulties could occur. He thought that it was important that the simplest and most efficient method of resuscitation of the apparently drowned should be given to the public and therefore he strongly urged that the prone and not the supine position should be used. He doubted if experiments on dogs were of much value, for the conditions present in the dog with regard to habits and position differed so entirely from those of man that the conditions could hardly be made comparable. The condition of the lungs found in the dogs drowned experimentally did not correspond with that which was found in man drowned, for in the latter case a considerable amount of water was usually found in the lungs. He thought that the danger of rupture of the liver was a real one and was another reason for not employing pressure during artificial respiration. In conclusion he said that both the Marshall Hall and Silvester methods had been shown to be capable of introducing air into the lungs, but that the public should be taught to use only one and that the Marshall Hall method.

Lieutenant-Colonel C. R. WOODS said that the first thing to do in resuscitating the apparently drowned was to get rid of the water from the lungs and this was most effectively done by turning the patient into the prone position. He thought that with a heavy body the rolling method had some advantage but that the Silvester method could be more readily carried out. He thought that too little pressure was often employed in expelling the air from the chest.

Dr. F. W. HEWITT called attention to the fact that there was often a considerable amount of muscular spasm of the upper air passages during the administration of an anæsthetic which might produce asphyxia and this was not removed even when the trachea was opened. He thought that the method of inflation of the lungs was of great service and that the method might be elaborated.

Dr. M. S. PEMBREY said that it did not seem to him that the absolute quantity of air made to enter the chest during artificial respiration was of much importance, for a few extra respirations made up for any deficiency in the actual amount at each inflation. The influence of the nervous system was a matter of great importance in man. The amount of water which the lungs would rapidly absorb was very considerable. Dr. Pembrey suggested that the method of absorption might be traced by colouring the water with carmine.

Professor SCHÄFER replied.

CLINICAL SOCIETY OF LONDON.

Ileo-cæcal Invagination by a Meckel's Diverticulum.—Sequel to a Case previously shown as one of Congenital Morbus Cordis.—A Case of Great Dilatation of the Heart.—Election of Officers

A MEETING of this society was held on May 22nd, Mr. HOWARD MARSH, the President, being in the chair.

Dr. J. P. ZUM BUSCH read a paper on a case of Ileo-cæcal Invagination by a Meckel's Diverticulum. The patient was a man, aged 21 years, an acrobat by occupation. He had suffered for several years from abdominal symptoms pointing to an intestinal growth. The condition became suddenly worse after a heavy strain during muscular exertion. Sickness and vomiting, the passage of blood by the anus, and the appearance of a quickly growing swelling in the ileo-cæcal region led to the diagnosis of invagination produced by intestinal polypus and necessitated an immediate operation. The abdomen having been opened, an ileo-cæcal invagination was found and with great difficulty reduced. This invagination was, however, only secondary to a primary invagination of a Meckel's diverticulum into the ileum. Extensive gangrene of the intestine rendered the excision of the whole invaginated portion (about three feet) necessary. Side-to-side anastomosis was performed and an uneventful recovery ensued. The condition described was a very rare one, as only 15 cases of invagination of a Meckel's diverticulum had been published; in 12 of these a secondary invagination of ileum into ileum or ileum into cæcum occurred. The prognosis of this condition seemed to be exceedingly bad, as in only one case had the patient recovered after excision of the gangrenous intestine. In that case, which was published by Brunner, it was not absolutely certain whether the inverted part was really a Meckel's diverticulum or whether it was an invagination produced by an accessory pancreas.—Mr. W. G. Spencer referred to the small lipomata found in the pancreas [illegible] formed the starting-point of c[illegible] Corner described the two [illegible]ticulum became invaginated. In some cases the invagination might start at the apex of the diverticulum and these mostly ran a chronic course. But in other cases the diverticulum became invaginated and the small intestine contracted upon it; the symptoms in these circumstances became acute.—Dr. zum Busch replied.

Dr. Percy Kidd narrated the sequel to a case previously exhibited before the society as one of Congenital Cardiac Disease. The patient was a girl, aged 23 years, who was shown before the society in February, 1901.[1] The case was regarded by nearly all those who saw it at that time as one of congenital morbus cordis. There were marked dilatation and hypertrophy of the right side of the heart and a loud second sound more marked over the pulmonary area. The patient died six months later and very extensive endarteritis was found to involve the pulmonary artery and its branches, though the pulmonary valves themselves were healthy. The lungs were engorged and the right side of the heart was much enlarged in consequence of the disease of the pulmonary artery. The history suggested that the arterial disease originated during intra-uterine life.—Dr. P. Horton-Smith had made the macroscopic and microscopic examination of this case. There was extensive and advanced chronic endarteritis in the pulmonary artery and its branches but limited to the pulmonary system of vessels. There was no emphysema of the lungs. The cause was very obscure; there was no history of gout, lead, or alcohol.—Dr. H. Batty Shaw remarked on the occurrence of a diastolic murmur on the right side of the sternum in this case. Such murmurs occurred in association with mitral disease, but it was probably generally due to leakage of the pulmonary valves. Dr. Kidd's case helped to substantiate this view.—Mr. Spencer discussed the occlusion of the duct of Botalli and the hypogastric arteries in relation to lesions of the kind under discussion.—Dr. F. Parkes Weber, referring to the diastolic murmur, asked whether there was any relative dilatation of the right auricle, because relative tricuspid stenosis might produce a diastolic murmur.—Sir Hugh R. Beevor referred to a case in which both pericarditis and aortic disease were suspected but dilatation of the right heart alone was found after death.—Dr. W. Ewart regarded diastolic murmurs such as that in this case as of mitral regurgitant origin and not arising in the pulmonary valve. He could hardly believe that the lesion, which was evidently a progressive one, in Dr. Kidd's case was of congenital origin though its cause was evidently very obscure.—Dr. Kidd, in replying, thought that the lesion must have arisen in intra-uterine life and it was undoubtedly progressive in its nature.

Dr. J. Porter Parkinson related the further history of a case of unusually Great Dilatation of the Heart. The patient had been shown to the society in January, 1901,[2] when the physical signs showed the heart to extend almost completely across the chest. There was a systolic and presystolic murmur both at the apex and in the region of the right nipple. There were remarkably few symptoms, dropsy only appearing during the last few weeks of life. He died in December, 1902. At the necropsy the heart was seen to be immensely enlarged and the pericardium was universally adherent. All the chambers were enlarged but especially the auricles and the right ventricle. The mitral orifice was exceedingly stenosed; the tricuspid valve was thickened and the orifice was somewhat stenosed. The heart weighed 30 ounces when empty of blood. The specimen was shown with the object of demonstrating that the systolic pulsation in the region of the right nipple was produced by the right auricle and not by the left auricle which, though much enlarged, lay at a distance from the surface.—Dr. Ewart remarked on the interest of the case as bearing on the causation of pulsation over the right auricular area.—Dr. C. W. Chapman referred to a somewhat similar case in which practically no symptoms existed.—Dr. Parkinson, in replying to Dr. W. Pasteur, stated that the pulsation over the auricular area was synchronous with the apex beat.

The annual meeting of the society was then held. The report of the council and the treasurer's statement of accounts were duly submitted and the usual votes of thanks to the retiring officers and council were proposed and adopted with acclamation. The scrutineers' report showed that the following gentlemen had been elected for the session 1903-04.—President: Dr. Frederick Taylor. Vice-presidents: Dr. D. B. Lees, Dr. H. A. Lediard, Sir William R. Gowers, Mr. H. H. Clutton, Mr. Henry Morris, and Mr. C. H. Golding-Bird. Treasurer: Mr. G. H. Makins. Council: Mr. J. Kingston Barton, Dr. F. E. Batten, Dr. J. Mitchell Bruce, Dr. J. Walter Carr, Dr. W. S. Colman, Dr. Lee Dickinson, Dr. S. H. Habershon, Dr. F. H. Hawkins, Dr. Kidd, Dr. Hector Mackenzie, Mr. F. W. Strugnell, Mr. Herbert W. Allingham, Mr. Leonard A. Bidwell, Mr. Walter Edmunds, Mr. J. Hutchinson, Jun., Mr. T. H. Kellock, Mr. H. Betham Robinson, Mr. Charters J. Symonds, Dr. C. S. Wallace, and Mr. F. C. Wallis. Honorary secretaries: Mr. Anthony A. Bowlby and Dr. W. Pasteur.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—A meeting of this society was held on May 15th, Dr. Frederick Taylor being in the chair.—Dr. J. Porter Parkinson showed a specimen of Colloid Cancer of the Peritoneum removed from a girl, aged 12 years. During life the abdomen was distended with free fluid and she was thought to be suffering from tuberculous peritonitis. On removal of the fluid large cells filled with colloid deposit were found in the detritus. An irregular hard swelling was then palpable in the hepatic area and some scattered nodules could be felt elsewhere. An abdominal section was subsequently made and the peritoneum was found to be sown with small masses of growth of a sodden semi-transparent appearance which microscopically were colloid cancer. Subsequently the abdomen became completely filled with irregular masses of growth which surrounded all the contained organs. The primary seat of the growth was thought to have been in the rectum.—Dr. A. E. Sansom thought that by reason of the patient's early age the case was probably a record one.—Dr. A. A. H. Partridge showed a boy, aged ten and a half years, the subject of Interstitial Keratitis who simultaneously developed an affection of the hands. He said that the cause to which the joint changes were due was an interesting question. The joints looked like those of osteo-arthritis but he supposed that they must be considered due to the general condition. An interesting point about the case was that the left hand became affected after the left eye and the right later—this happened in November, 1901; the right eye failed in January, 1903.—Dr. Edmund Cautley said that the disease did not seem to him to be a syphilitic affection of the joints; he was much more inclined to consider it a case of osteo-arthritis arising in a child the subject of inherited syphilis.—Dr. G. A. Sutherland said that he thought that the joint changes were probably syphilitic in origin.—Dr. George Carpenter agreed as to the striking resemblance between the child's condition and osteo-arthritis. He thought that there was periosteal thickening of the heads of the metacarpal bones and that the condition of the knuckles could not be distinguished from syphilitic epiphysitis.—Dr. F. Parkes Weber said that he had examined the case very carefully and the evidence was very strong in favour of the state of the joints being due to congenital syphilis. Unlike osteo-arthritis there was a complete absence of tenderness and the movement in the joints was almost perfect. The changes were almost entirely confined to the bones and the periosteum. Certainly there was just the slightest effusion into one or two of the joints. He regarded the case as one of phalangitis of syphilitic origin.—Dr. Cautley showed the Stomach and Œsophagus of an infant, aged 18 months, who had died from Diphtheria. The child was admitted into hospital for constipation and anuria and ten days later developed bacilluria, the variety being the bacillus coli. Subsequently the patient became feverish, profoundly asthenic, and died in 12 days from the onset of the fever. The œsophagus contained membrane in the upper third. One third of the mucous membrane of the stomach towards the pyloric end was covered with yellowish-grey membrane. —Dr. Watson said that he had obtained a pure culture of the Klebs-Löffler bacillus from the mucous membrane of the stomach and also in sections of the stomach wall.—Dr. Parkinson showed a case of Enlarged Bronchial Glands in a child, aged four and a half years, which was associated with a paroxysmal cough like whooping-cough. The associated signs were those of bronchitis with breath sounds weaker on the right side and in places somewhat bronchial in quality. There was much sputum which was free from tubercle bacilli. The fingers and toes were clubbed. He thought that there were enlarged mediastinal glands pressing on the right bronchus with secondary dilatation of the tubes and that the "whoop" was occasioned by irritation of the vagus nerve. The very continuous whoop was so distinct that the child was not allowed by the mother's friends to associate with their children and had been sent out of hospital on several occasions as a case of whooping cough.—Dr. Taylor showed a case of Athetosis in a girl suffering from mitral disease. She was suddenly attacked with right-sided hemiplegia during sleep and some twitchings of the right arm and leg were noticed at the onset. Involuntary movements commenced in the right hand and foot two days after the hemiplegia began. The condition was probably embolic and permanent.—Dr. Sansom said that there was no question as to the embolic plugging of the left middle cerebral artery. Plugging in a purely rheumatic case of heart disease was not quite so common as was sometimes thought.—Dr. Sutherland said that the case seemed to be one of chorea from the nature of the movements. The movements were very rapid for athetosis and there was also the fact of the rapidity of their onset, and there was the association of endocarditis which was a strong point in favour of chorea and he did not think that the absence of facial movements absolutely excluded chorea.—Dr. Taylor also showed a case of Acute Anterior Poliomyelitis involving the abdominal muscles as well as the legs and lumbar muscles. He said that the more he saw of cases of infantile paralysis the more he found that the abdominal muscles were involved and he thought that the lesions were as much primary there as in the limbs.—Dr. E. C. Williams (Bristol) read a paper on a case of Infantilism in a child, aged ten years, who had not grown since four years old. Her weight was 26 pounds and her height was three feet. She was awkward to manage and rather dirty in her habits. She could read her letters and count and answer simple questions fairly intelligently. There was no heart disease; she was free from congenital syphilis and rickets and she lost weight under thyroid treatment.—Dr. Carpenter drew attention to the association of infantilism in congenital syphilis with atrophied testicles. He suggested that Dr. Williams should make a rectal and bimanual exploration of the pelvic viscera and report upon the condition of the uterus and the Fallopian tubes and ovaries, as it would make the case more complete if that were done.—Dr. John McCaw (Belfast) read a paper on a case of Splenic Leukæmia in a child, aged 18 months. There was no history of syphilis and the patient was not rickety. The accessible lymphatic glands were enlarged. The spleen reached to the umbilicus and the liver also. The urine was loaded with oxalates and contained a trace of albumin. There was intense leucocytosis; the lymphocytes reached 99·2 per cent. of the leucocyte count. The red corpuscles were diminished by more than half and a few nucleated corpuscles were seen. The hæmoglobin was 39 per cent. She subsequently developed purpura and died soon afterwards. The spleen diminished in size very considerably before death and was not nearly so hard as it was previously to the touch. The swelling of the lymphatic glands disappeared to a large extent and they were not so hard.

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[1] THE LANCET, March 2nd, 1901, p. 628.

[2] THE LANCET, Feb. 2nd, 1901, p. 325.

ILFORD MEDICAL SOCIETY.—A meeting of this society was held on May 7th.—Mr. C. W. Mansell Moullin read a paper on the Treatment of Fractures into Joints and Sprains at the present day compared with that which was in vogue a few years ago. Formerly a Pott's fracture was put up in splints or in plaster-of-Paris for four or five weeks without being moved or touched in any way and as a result when the limb was taken down and the patient was assured that the fracture had united the limb was quite useless. It was cold, heavy, and stiff, all the muscles were wasted, the tendons were glued down to their sheaths, the joint could not be moved, and if the limb were used at all or allowed to hang down it became swollen and painful at once. It often took longer for the patient to recover from the effects of the treatment than it did for the fractured bones to unite. In Colles's fracture the results were even worse. Not only the wrist but the fingers were left stiff and painful so that the hand was helpless and useless. The knee, if the patella were broken, was more fortunate, for owing to the wide gap left between the fragments stiffness was not so common unless, as occasionally happened, the upper fragment became glued to the lower end of the femur by adhesions. In sprains, when, for instance, the internal semilunar cartilage became displaced or torn, the effect was just the same. The knee became cold and stiff as a result of the treatment. It had to be massaged and douched for weeks before it regained anything like its full range of movement and sometimes it never did so, especially in a hysterical girl. Rest was undoubtedly necessary for broken bones or torn ligaments to unite, but absolute rest, combined with uniform pressure, uninterrupted for weeks together, was thoroughly bad for every other structure in the limb—thoroughly bad even when there had been no injury, and worse still when there was a large amount of extravasated blood and effused lymph filling up all the interstices and matting everything together. In the treatment of a fracture leading into a joint the object was to replace the fragments in their natural relation and to keep them there until they were joined. But the extravasation of blood and the effusion of lymph must be checked as soon as possible. All that had been poured out already must be absorbed and driven into the lymphatics as soon as it could be. The muscles must be prevented from wasting. The joints must not be allowed to become stiff and the nutrition, the blood-supply, of every structure and tissue in the limb must have as much attention paid to it as the union of the broken bone. This could only be accomplished by systematic massage, begun very quietly and gently the day after the accident and continued every day, doing a little more each time until the swelling had entirely gone and the joint could be moved by the manipulation through almost its full range. There were some cases in which the injury was too grave or the patient was too violent, but these were very few; and even in them the line of treatment must be the same although it could not be carried so far. The limb must be placed upon a splint so contrived that it could be exposed thoroughly by removing a bandage without risk of displacement. In a Pott's fracture this could be readily done by means of a back splint with a moveable foot-piece. In a Colles's fracture a Carr's or a Griffith's splint answered in the vast majority of cases provided that the fragments had once been got into good position, but in many only a guttapercha wristlet was required. A fracture of the patella, on the other hand, required wiring. Mr. Mansell Moullin stated that for many years past he had wired every case of fractured patella and had never had a moment's uneasiness about them. No splint at all was necessary. The knee was bandaged after wiring and the patient was placed in bed and encouraged to move it about. At the end of eight or nine weeks patients treated in this way were able to walk, to run, to kneel, or even to kick with the injured leg. The massage might be carried out by an experienced nurse but as a rule, at first at any rate, the surgeon should do it himself.

BRITISH GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on May 14th, Dr. Heywood Smith, the President, being in the chair.—Dr. H. Macnaughton-Jones, using the epidiascope, showed Sections of Ovaries removed from patients who had for years been sufferers from incurable dysmenorrhœa. The sections (prepared by Mr. G L. Eastes) showed a condition of cirrhosis and cystic degeneration throughout the entire substance of the ovary, the capsule being considerably thickened and the cellular elements being almost indistinguishable in parts.—Dr. Macnaughton-Jones also showed a Uterus with the Adnexa removed by Professor Bumm's method. A carcinomatous mass occupied the fundus but the cervix was quite free from disease. The advantage of the operation (which Dr. Macnaughton-Jones had already described in the Journal of the society bearing date February, 1902) consisted in the rapidity with which it could be performed and its absolutely bloodless nature. Also there was no danger of wounding the ureters and the vault of the vagina could be dealt with according to circumstances. The operation was suitable to such a case as the present or comparatively small myomata or certain forms of malignant endometritis or deciduoma.—Mr. Charles Ryall confirmed Dr. Macnaughton-Jones's statements as to the bloodlessness and rapidity of the operation.—Mr. F. Bowreman Jessett, Dr. William Duncan, Dr. Mansell Moullin, and the President, while expressing their interest in Professor Bumm's method, concurred in the opinion that the uterus could be removed as quickly and with as little loss of blood by ligaturing the broad ligaments without forceps and they thought that the presence of such a number of the latter must be a disadvantage.—Dr. Bedford Fenwick showed two Enlarged Ovaries which had been adherent to a fibromatous uterus extending nearly to the ensiform cartilage and had therefore been removed with it. In a large number of hysterectomies he had found more or less gross disease of nearly every ovary and tube and if that were the case generally he thought it would be a grave error not to remove the ovaries with a diseased uterus.—Dr. Herbert Snow said that pain, though mainly due to tension of the capsule, might also arise from peritonitis or pressure.—Mr. Jessett, Dr. C. H. F. Routh, Dr. F. A. Purcell, and Dr. Duncan, while agreeing that the amount of disease shown in the sections quite justified the removal of the ovaries, spoke strongly in favour of conservative measures and of the importance of preserving a portion of even one ovary.—Mr. Jessett opened the discussion of his paper on Intestinal Obstruction, a rare complication of Ectopic Gestation, which was read at the last meeting. He said that owing to the pain being entirely above the umbilicus the case had been diagnosed as one of diaphragmatic pleuritis. The patient when he saw her had all the symptoms of intestinal obstruction. She had not been pregnant for nine years and her menstruation had been regular until, five days previously, she was suddenly seized with pain between the umbilicus and ensiform cartilage and became collapsed. An operation was performed but death ensued the same night.—Dr. Mansell Moullin said that he had met with two somewhat similar cases.—The meeting concluded with some further demonstrations from the epidiascope.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The eighth meeting of the session was held in the Medical Library, University College, Bristol, on May 20th, Mr. G. Munro Smith being in the chair.—Mr. John Chiene, professor of surgery, University of Edinburgh, gave an address on Movement, laying special stress on the importance of voluntary movements in the treatment of fractures and sprains.

Reviews and Notices of Books.

Therapeutics of Infancy and Childhood. By A. JACOBI, M.D., LL.D. Third edition. London and Philadelphia: J. B. Lippincott Company. 1903. Pp. 560. Price 18s. net.

IT is probable that the first edition of Dr. Jacobi's "Therapeutics," which was published in 1895, was not extensively read in this country except by those who make a special study of the diseases of children. Times change, however, and the industry of American authors and publishers has introduced so many excellent medical text books to the notice of our own students that it has become a fashion among us to rely on American publications for much of the information which is necessary for our professional education. In no department of medicine is this confidence in American books better justified than in those which are concerned with the diseases of children. Dr. Jacobi may fairly be regarded as the father of pediatrics, and although he is better known to fame as a clinician than as a writer, owing to the respect with which everything which he has to say on the subject of treatment is received in this country, it may safely be assumed that the present edition of his "Therapeutics" will be far more widely read than was the case with the former editions. The volume under review is a systematic and complete treatise on the therapeutics of childhood and it is by no means confined to medical subjects but includes the treatment of a number of conditions which more usually come within the province of the surgeon. For instance, anatomical deformities, congenital luxations, fractures of bones, hernias, and hydrocele all receive the attention of the author. Although the various conditions are seldom illustrated by cases, nevertheless, without this popular method of making a work on therapeutics interesting, the author contrives to hold the reader's attention by the vigour and directness of his style.

Dr. Jacobi, as is well known, is no great believer in drug treatment and much of his advice depends on the application of prophylactic measures and dietetic and hygienic management. He appears, however, to have faith in the administration of arsenic and phosphorus in the treatment of cases which depend on constitutional dyscrasias and neurasthenic states. Dr. Jacobi, in common with many other experienced clinicians, has certain prejudices in treatment. For instance, his confidence in decoctions of cereals and dextrinised flours in the routine feeding of infants appears to us to be put on a higher pedestal than it genuinely deserves. We do not imagine that there are many authors who would contest with him his right of priority in the usage of these diluents, nor do we regard the question as of sufficient importance to make it a ground for dividing the medical world into two classes, the faithful and the unfaithful, those who believe in cereal decoctions and those who do not. The truth is that in experienced hands success in the feeding of infants can be achieved either with or without the assistance of any diluents other than water. Another matter with which we have greater sympathy is the free administration of water to infants and children as a routine practice. This is a humane and scientific precaution which is too often neglected. Another point which Dr. Jacobi urges is the superiority of cane sugar as opposed to milk sugar and he adduces arguments in favour of the former which we do not consider to be convincing. On the subject of cream the author's views do not agree with those which are generally held. He minimises the troubles of nutrition which may arise from a deficiency of this element and we cannot help thinking that he exaggerates the dangers which are likely to accrue from excess. For instance, he apparently regards the production of rickets as almost independent of starvation as regards fat. He considers over-alimentation as at least as dangerous as under-alimentation in the production of this nutritional disorder and in this latter contention we are disposed to agree with him, although this view is not generally held.

In discussing the question of difficult dentition we notice the statement that "dentition is a physiological process" and that "the long period of dentition is also the time of many disorders and diseases which are not easily diagnosticated and may tempt the practitioner to suggest or accept a diagnosis of difficult teething," and farther he says, with an undercurrent of sarcasm, that "there are, fortunately, practitioners who prefer making a diagnosis of the real condition of the ailing baby, and that and its improvement or cure comprise *the main treatment I recommend for difficult dentition.*" The aphorism that dentition is a physiological process is a meaningless truism which has crept into one text-book after another until practitioners almost hesitate to ascribe any of the conditions which they meet with during the period of dentition to causes which directly follow from this "physiological act," lest they expose themselves to the ironical gibes of superior persons. Of course, nobody doubts that the act of cutting milk teeth is just as much a physiological process as that of cutting the wisdom teeth, or, for the matter of that, of the act of parturition, but all the same the three processes are, unfortunately, apt to cause a disturbance in certain subjects of the general bodily equilibrium which is, to say the least, exceedingly disagreeable to the victims. It is true that bronchial, gastric, or intestinal symptoms frequently arise during the period of dentition in infants who have been mismanaged and that these symptoms might never have arisen had no such mismanagement been in force, but the general disturbance of the nervous system which occurs from the peripheral irritation of the erupting tooth must legitimately be regarded as the exciting cause of the special morbid manifestations in the weak or mismanaged organ.

There are several minor points which a careful reading of this book may suggest for criticism. We notice on p. 5 that it is stated that "in face of the fact that the percentage of fat in cow's milk and in human milk is practically the same, the addition of cow's cream to cow's milk to make it more similar to woman's milk does not appear very rational." The *rationale* of the procedure would be more evident if the author had used the expression "diluted cow's milk" instead of "cow's milk." We imagine that cream is never added by reasonable persons to undiluted cow's milk for the purpose of infant feeding or for the purpose of bringing it up to the standard of human milk. On p. 132 there is the following sentence: "Laryngismus stridulus, the crowing inspiration of infants, is almost always connected with craniotabes and caused by its meningeal and encephalic results." And on the following page it is stated that "the arteries in rhachitis are abnormally large and that the great width of these vessels lowers the blood pressure. That is why the muscles and bones suffer from insufficient nutrition and why the circulation in the respiratory organs is slow and sluggish, with a tendency to produce congestion and catarrh." These pathological explanations are not, to our thinking, convincing or logical.

In his preface Dr. Jacobi acknowledges that he has freely availed himself in the revising of his book of the criticisms of reviewers. We may therefore be pardoned if we add one more criticism and call attention to the word *nucleon* which appears in several pages and also in the index and which presumably is not a *lapsus calami* or a printer's error; *nuclein* is, we imagine, the word which Dr. Jacobi intends to use. In conclusion, we may say that the main principles of treatment which he recognises and describes are quite beyond criticism and we strongly recommend all those who take a practical interest in the treatment of infants and children to add this volume to their libraries and to refer to it whenever they find themselves in a difficulty or come to the end of their own therapeutic resources.

Atlas und Grundriss der Allgemeinen Diagnostik und Therapie der Nervenkrankheiten. (Handbook of the General Diagnosis and Treatment of Diseases of the Nervous System.) By Dr. W. SEIFFER, Lecturer to the University and Senior Surgeon to the Hospital of Royal Charity for Nervous Diseases. With 24 Plates and 264 Illustrations. München: J. F. Lehmann. 1902. Pp 380. Price 12*s.*

THIS is the twenty-ninth volume of Lehmann's series of medical handbooks, which has already won a considerable reputation on account of the excellence of the plates and drawings by which the subjects of the series are illustrated. In the present volume this feature is well maintained. The text is admirably illustrated with reproductions from photographs of patients suffering from the diseases under consideration and the coloured plates are especially worthy of the highest praise. The text is quite satisfactory so far as it goes but it cannot be said to give more than a very elementary outline of the subject. The greater part of the book is devoted to the symptomatology and diagnosis of nervous diseases. The author deals with his subject by the inductive method. Facts to be observed—namely, the signs and symptoms of disease—are first considered and then the diseases which may give rise to them This part is therefore arranged according to the nature of the symptoms. Motor phenomena are taken first—conditions of paralysis, atrophy, incoördination, spasticity, and contracture; then follows an account of sensory disturbances; and finally reflex, vaso-motor, trophic, and visceral disturbances are brought under review. While this method possesses certain advantages from a practical point of view it fails to give a well-defined picture of a symptom-group representing a certain disease, and it is only by possessing some such mental picture that one nervous disease can be clearly differentiated from another. In a book specially devoted to the diagnosis of nervous diseases the reader would expect to find perhaps a fuller discussion of the lesser signs and symptoms as aids to difficult differential diagnosis, especially in regard to the localisation of cerebral and cerebellar tumours; but as the title indicates the subject is only treated in a very general manner and the book is to be regarded therefore rather as an adjunct to the ordinary text-book than as a complete manual on the subject. In the second part, which deals with the treatment of nervous diseases, the author enters into practical details of considerable value in the treatment by massage, electricity, baths, and exercises.

Les Injections Mercurielles Intramusculaires dans la Syphilis. (Intramuscular Injections of Mercury in Syphilis.) Par Dr. ALFRED LÉVY-BING, Ancien Externe des Hôpitaux, Ancien Interne de Saint-Lazare. Paris: C. Naud. 1903. Pp. 322. Prix 5 francs.

IN this interesting treatise Dr. Lévy-Bing gives a full account of his experiences in the treatment of syphilis by the intramuscular injection of mercury. In the space of two years he has carried out more than 6000 injections on about 500 patients. These injections were made with all the different mercurial preparations now on the market for the purpose and he is therefore in a position to draw definite conclusions as to their relative merits and demerits. The first few chapters are devoted to a consideration of the advantages and disadvantages of this form of treatment, the indications and contra-indications for their use, and the technique of the injections. The author claims for this method of treatment that the quantity of mercury received into the system is known exactly and that it can be accurately controlled, that it brings the patient more rapidly and surely under the influence of the drug, and that it does not cause the same gastro-intestinal disturbances as when it is exhibited by the mouth. Its chief drawbacks are: (1) the pain accompanying the injection and (2) the local disturbances—inflammations, indurations, and abscesses—which may arise at the sites of injection. The rest of the book is taken up with a description of the author's experiences with each mercurial preparation. In every case he gives the pharmaceutical details of the preparation, together with the dose for injection, and exemplifies its action by cases. The chief indications for which he recommends the adoption or rejection of a preparation are: (1) the pain caused by the injection; (2) its liability to set up local trouble; (3) its tendency to cause mercurial symptoms; and (4) its medicinal efficacy. The preparations are divided into soluble and insoluble. The soluble act more rapidly and are less painful but have the disadvantage of requiring daily repetition, whereas the insoluble preparations need only to be injected about once a week. Of the soluble preparations Dr. Lévy-Bing considers the biniodide of mercury in aqueous solution to be by far the best both on account of its efficacy and also its innocuousness. The perchloride is more painful and frequently gives rise to stomatitis and diarrhœa. Among the insoluble compounds the so-called "huile grise" is recommended, consisting of a mixture of mercury, lanoline, and vaseline. Calomel is by far the most rapid and efficacious in its action, but its injection is very painful and frequently gives rise to local inflammation and even abscess. Most of the other preparations are condemned either on account of the pain and local trouble to which they give rise or on account of their medicinal inertness.

The treatise is a valuable contribution to an important branch of therapeutics and is a thoroughly scientific record of the author's experiences.

Variations in Animals and Plants. By H. M. VERNON, M.A., M.D. Oxon., Fellow of Magdalen College, Oxford. London: Kegan Paul, Trench, Trübner, and Co. 1903. 8vo, pp. 418. Price 5*s.*

DR. VERNON in his preface to this contribution to our knowledge of the subject of variation apologises for making a large use of instances collected by himself from his own original investigations into the subject. This apology we consider to be quite unnecessary and, indeed, the very fact that the author has relied largely upon his own views and discoveries not only adds to the interest of the book but raises it at once above the level of the mere manual. It is an example—which might with advantage be more universally followed—of precisely the right method of book-producing.

At the present moment the facts of, and theories concerning, variation occupy a very prominent position in the biological world. Many workers in this country and abroad are concerned exclusively with these important problems of which the solution, if indeed it be possible at present, will provide the key to the explanation of evolution. The novice in these matters who would be abreast of current discovery and speculation is led by degrees from ascertained facts to its interpretation and in a very clear fashion is introduced to the methods now in vogue of representing in a graphic way the facts of variation. The more severely mathematical methods of stating these facts are not put forward by Dr. Vernon. There is thus nothing to prevent the person of average intelligence from profiting much by a perusal of this plain statement of variation in animals and plants. Naturally, as the author is himself a zoologist, the facts of animal variation preponderate over those of plant variation. Dr. Vernon is committed to no particular theories; he reviews and discusses the facts in a perfectly fair manner, and without any of that acrimony which this particular study seems to have produced in its votaries. Such ferocity of controversy is, we fear, rather a hint that the matters debated are, after all, not nearly ripe for solution, if, indeed, they ever will be; for it is invariably subjects quite or almost unknowable which breed rancour in disputants. The believer in every cause of variation will find some facts to support his views in this volume. The direct effects of external agencies, such as light and food, are amply stated and the author by no means thinks that natural selection is the "universal key," as is apt to be held by the more extreme followers of Darwin and Weismann. Some highly important experiments made 40 years ago by Mr. Gregson upon the effects of change of food upon the adult moths hatched from the caterpillars thus experimented with are appreciatively quoted by Dr. Vernon; and a very remarkable case of a similar nature recorded by the late well-known entomologist Mr. Newman is cited as an instance of the direct effects of food. This naturalist fed the "large tortoiseshell" butterfly caterpillars upon nettles and discovered that the resulting butterflies had many of the characters of the "small tortoiseshell," a species which normally feeds upon that plant. There can, in fact, be no doubt whatever that direct influences of the environment play an important part in the production of new varieties, and that therefore they must have played such a part in the past. More important, of course, from the point of view of the origin of species is the fact recently stated by Dr. Standfuss that an artificially produced variation "bred true" and produced its like.... It is plain, therefore, that that entomologist has produced an actually new form of life.' But though it may be shown, and in our opinion has been shown, that variation can be produced by varying salinity of water, by varying temperature, and by other such causes the action of natural selection is not necessarily thereby eliminated. On the contrary, it is easy to see on theoretical grounds where it could "come in" in many of these cases. The real difficulty for the believer in natural selection as the sole cause of survival is to connect its eliminating action with minute variations which seem to have, as it were, no utility. It is intelligible, for instance, that the minutest increase of lung tissue or of the thickness of the ventricles in a running animal might just make the difference between its capture by a carnivorous pursuer or its escape, but it is not so clear why the minute differences of microscopic sculpturing upon the bristles of annelids should occur. In this direction lie the labour and toil for those who would ascend from the pit of ignorance.

Atlas und Grundriss der Topographischen und Angewandten Anatomie. Von Dr. med. OSKAR SCHULTZE, a.o. Professor der Anatomie in Würzburg. Mit 70 Farbigen Tafeln nach Originalen von Maler A. SCHMITSON und Maler K. HAJEK, sowie 23 Textabbildungen. München: J. F. Lehmann. 1903. M. 16. (*An Atlas and Epitome of Topographical and Applied Anatomy.* By Dr. OSCAR [illegible] Coloured Plates after [illegible] HAJEK, and 23 Illus- [illegible] F. Lehmann. 1903. Pp. 156. Price 16 marks.)

DR OSKAR SCHULTZE adopts as his motto the words, "think anatomically if you would be a physician." This atlas and epitome of topographical and applied anatomy of which he is the author will certainly engender this method of thinking in those who read it. The volume has the advantage of being of handy size (about 8 by 10 inches), which is double that of the series of hand atlases which we already owe to German enterprise. This increase in size is a decided gain, allowing a far better display of the plates. The work is beautifully illustrated and the descriptive letterpress is concise but at the same time more than a bare enumeration of unconnected but important anatomical facts. The book is arranged in sections, each of which is devoted to a different region of the body, the head, neck, upper extremity, thorax, abdomen, pelvis, and lower extremity being treated in the order mentioned. At the end of every section is printed a series of examination questions calculated to bring into prominence important points and to afford a ready test of the information acquired by the reader. The whole work is essentially practical and the illustrations have been chosen with considerable discrimination. All the coloured plates are good and the majority of them are of a very high order of excellence. Half a dozen of the plates are representations of His models with which most, if not all, English students are familiar. Many of the others are drawn from formalin preparations. The lithographic plate No 10 and the coloured plate No. 54 showing the relations of the thoracic aorta are very instructive, as also is Fig. 54 which brings out in a striking differences of opinion. From a careful review of them we unhesitatingly state that in our opinion the curriculum is a great improvement on that at present in force and that students who follow it will be better medical practitioners than would have been the case had they studied under the former scheme. We agree with the statement made by Dr. BRADFORD in convocation that under the new regulations the schools will be further encouraged to develop higher education and research in many departments, especially in physiology and pathology. We would urge those who are disposed to take exception to special details to remember how very complicated a question medical education has become and how impossible it is to please all parties. It cannot be decided how some of the changes will work out till they have been put in practice. The ease with which teachers are now able through the Faculty of Medicine to draw the Senate's attention to defects in the curriculum and to submit proposals for its improvement should insure the speedy discovery and correction of any points that have been overlooked in drafting the new regulations.

Another subject of interest at present under the consideration of the University is the question of instituting special degrees in dentistry to which we called attention in our last issue. The statutory commissioners established a board of studies in dentistry and this board having been duly constituted recently presented to the Senate a report upon the question of degrees. This report, together with a minority report, was last week submitted to a meeting of the Faculty of Medicine. As will be seen from a notice of this meeting in another column the faculty expressed an opinion adverse to the proposal to establish special degrees. As both the majority and minority reports recommended that degrees should be instituted it would appear at first sight that the faculty had shown a want of sympathy with the desire of the dental profession. As the result, however, of some unexplained cross-voting by members of the board of studies upon a somewhat irrelevant amendment the issue presented to the faculty was confused. As we stated last week the question is an important and difficult one and we trust that the proposal will not be abandoned without further careful consideration. Upon those interested in this question, as well as upon those interested in the general development of the University, we would urge the importance of united action and efficient organisation.

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The Infected Blankets.

WHETHER or not the outbreak of enteric fever which occurred on board the reformatory ship *Cornwall* is to be attributed to the infected blankets which were discovered on the vessel is a matter concerning which an open mind must be preserved until the matter has been investigated in a systematic fashion and a report thereon issued. If the necessary detailed investigation has not yet been commenced it is to be hoped that the Local Government Board or the Home Office will undertake it. But whatever may be the facts as to the causation of the outbreak there can be no two opinions as to the necessity for fixing the blame upon those responsible, either in a positive or negative sense, for the dissemination over this country and, for anything we know to the contrary, other countries of soiled and, at least in some instances, specifically soiled blankets. Whether blankets alone have been thus scattered, or whether, in addition, other disused and possibly infected material has found its way into public use cannot be yet stated, but we trust that inquiries in this direction will be made by the authorities concerned.

That there are certain regulations which are intended to prevent the sale of infected bedding is but small comfort to the public in the circumstances, since it is clear that the regulations are in point of fact not sufficient to prevent such materials from falling into the hands of the public. It would, of course, be unreasonable to assume that the whole of the blankets which it is alleged were sold at the Cape for $2\frac{1}{2}$*d.* apiece were blankets which had been used in hospital by patients suffering from recognised enteric fever. It may, indeed, be subsequently found that at least some of the blankets which have been demonstrated bacteriologically to contain the living enteric fever bacillus may have been used by soldiers who were in the early and unrecognised stage of the disease and who had passed on to other places, leaving behind them the blankets which they may have specifically soiled. But however this may be, the fact that in practice blankets, an uncertain number of which are infected, have found their way into the public market remains, and the public health service of this country has a right to ask not only that the matter shall be probed to the bottom but that satisfactory assurances shall be given that a recurrence of such a risk, on however small a scale, has been provided against. It cannot, we think, be said that the answers given in the House of Commons to questions directed to the elucidation of the mystery have evinced a sufficiently serious appreciation on the part of the War Office of the material risk which has been run by the public, and although there is obviously no need for alarmist statements we trust that the lay public health service will urge upon the Local Government Board the necessity for pressing the thorough investigation of the subject. If our port sanitary authorities throughout the country are to have placed upon them the duty of disinfecting all the bedding, clothing, and the like, which reach our shores during months or years after the cessation of the numerous campaigns in which this country is at intervals engaged, the claim for a national subvention which the port sanitary authorities have made from time to time will be very difficult to resist. It would seem clear, however, from the recent occurrences that no disused bedding, whether it has served for hospital purposes or not, should be placed upon the markets until it has been cleansed and *efficiently* disinfected. The seizures of blankets which have now taken place in numerous parts of this country will possibly lead to unfortunate action on the part of the owners of such goods, and this is more likely to be the case in places where the absence of proper plant for cleansing and efficient disinfection has resulted in the destruction of the blankets. Every local authority ought morally, if not legally, to possess plant wherewith both these processes can be performed. The necessity for the previous washing of the blankets in cold water arises, apart from general

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disinfection by steam, which, as is well known, is the only method by which efficient disinfection can be performed, is apt to fix permanently any pre-existing stains. But we would urge upon local authorities the importance of incurring no risk as to the public health and if the infected articles cannot be adequately disinfected we trust that no parsimony will prevent the destruction of the articles in question and the payment of a fair compensation to the owners.

In some ways this regrettable occurrence will expose us to the ridicule of certain other nations, but nevertheless in no other country in the world does there exist a public health service which could have acted with greater promptitude and efficiency than has been the case in this country. The action of our port and inland sanitary authorities and of the central health department has been such that the country may well feel proud of its sanitary administration. From a purely scientific standpoint the occurrence is not without importance as it raises interesting points as to the persistance of vitality on the part of the enteric fever bacillus when this organism is retained in circumstances unlikely to promote its destruction. Much useful work in this direction has already been done by Dr. SIDNEY MARTIN and Dr. A. C. HOUSTON for the Local Government Board, and Major R. H. FIRTH and Major W. H. HORROCKS have also made valuable contributions to the subject. In this connexion we are glad that the desirability of a joint inquiry into this subject by the War Office and the Medical Department of the Local Government Board has been pressed upon the authorities.

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The Collection and Distribution of Milk.

DIVERGENT opinions are held by bacteriologists and by medical practitioners whose work lies chiefly among children as to the advisability of sterilising the milk which is given to infants. It is maintained by many that the process of sterilisation causes a degree of depreciation in the food value of milk which is not compensated for by the diminished risk of infection through the agency of the micro organisms which milk is apt to contain and for the development of which it forms such a suitable medium. On certain points, however, there is general agreement. The importance, for instance, of subjecting milk to as few chances as possible of becoming contaminated is not likely to be disputed and to achieve this the collection and the distribution of the fluid must be conducted with the strictest sanitary precautions. Again, in order that the milk of cows shall realise for human beings that ideal of the "perfect food" which elementary text-books of physiology credit it with approaching, it must undergo certain modifications and these may take one of two directions—the production, on the one hand, of a nutritive agent approximating in composition as closely as may be to normal human milk or, on the other, of a substance which is neither cow milk nor "humanised" milk, but which is specially adapted to meet some particular abnormal digestive condition. In regard to all these matters much has been done in this country. Sanitary authorities acting through their medical degree of control over the supply of milk to the districts within their jurisdiction, while private enterprise on the part of the larger dairies has made provision to satisfy the demand for preparations made from milk. At Battersea and at St. Helens in Lancashire the respective borough and county councils have entered the field as purveyors of milk of guaranteed purity. Although their undertakings can hardly be said to have passed beyond the experimental stage we have evidence of a public spirit which is worthy of commendation. Something is also done by health officers in the way of circulating leaflets bearing upon the relation of the consumption of milk to infectious disease and recently it has been suggested that systematic instruction as to the possibilities, for good and evil, of milk should be imparted in board schools, at least to the elder girls.

But there is still room for improved methods of disseminating knowledge and it would seem that here, as in so many other instances, we have something to learn from our continental friends. From May 2nd to 10th there was held in Hamburg an Exhibition for Promoting the Hygienic Supply of Milk which, since it affords many useful hints as to further progress, may be considered in some detail. The exhibition was divided into sections dealing with the milk question in many of its aspects. Thus in Section A, which was devoted to "milk production," were shown cows of well-known breeds which were made the subject of important demonstrations in the art of milking and the general management of shippons. The best styles of stall fittings and of utensils for the collection of milk were displayed, while the matter of suitable clothing for the milkers received attention. In Section B, which dealt with the veterinary control of the cows and of the milk-supply, information was supplied in regard to legislation relating to the control of cowsheds. The measures to be taken in case of an outbreak of disease among cows were set forth and an exposition was given of the forms of disease to which milch cows are liable, with special reference to diseases of the udder. Here, too, were included the effects of poisonous or otherwise unsuitable food-plants and of impure water. This branch of the subject was completed by reference to the materials used and the procedure adopted in disinfecting the stalls. Section C was concerned with the utensils and apparatus employed in the conveyance of milk by road or rail or water and in its distribution. It embraced the weighing and measuring of the fluid and the cleansing and filling of bottles used for its storage. The processes of separation, cooling, pasteurisation, sterilisation, and concentration were also dealt with in this section. The fitting up of establishments, small and large, for the sale of milk was the subject-matter of Section D. Section E had reference to the legislation concerning the sale of milk, the police supervision of dairies and milkshops, the taking of samples for analysis, and the chemical and bacteriological methods employed in such analysis. In the scientific Section, F, it was possible to learn something of the history and literature of the employment and distribution of milk and also of the means by which instruction in dealing with milk is provided. To Section G was allotted the display of preparations made from milk—e.g., preserved milk,

milk adapted to the requirements of infants, milk for therapeutical purposes, and milk foods of various kinds. Section H illustrated the arrangements and apparatus necessary for properly dealing with milk in private houses.

It ought to be possible to hold an exhibition of this kind in London. Whether to do so would be financially profitable to the promoters is, perhaps, doubtful, but the educational value of the proceeding would be so great as to justify contribution from the national purse. The idea, too, is one capable of development. Without obscuring the scientific aspects of the exhibition more popular elements might be added. The art and mystery of butter-making and sophistication might be expounded and demonstrations might be given of the manufacture of the many varieties of cheese. Experienced cooks might offer for inspection samples of the thousand-and-one dishes into the composition of which milk enters and a corner might be reserved for teaching something of the applications of koumiss. There is here, indeed, almost enough material for an Earl's Court exhibition, though it might be a little undignified to combine amusement with instruction, in the way beloved of the Londoner, by giving him an opportunity of shooting the chute on a milkman's-barrow or by converting the great wheel into a gigantic churn.

Annotations.

"Ne quid nimis."

THE TREATMENT OF YOUTHFUL CRIMINALS AT THE ELMIRA REFORMATORY.

A VALUABLE and interesting report for the year 1902 dealing with the treatment of young criminals at the New York State Reformatory at Elmira has just been published. The total number of inmates who have been in the institution during the year was 2134, of which number 858 have been cases admitted during the year. 611 inmates were discharged from the reformatory during the year. Nearly three years ago a careful examination of the whole inmate population was made by Dr. Frank W. Robertson, then senior physician, and a number of inmates were found whose mental condition was so abnormal or disordered or defective that they were totally unfitted to derive benefit from the special advantages offered by the institution. They were accordingly transferred to the Matteawan State Hospital for the Insane. Dr. Robertson, now the general superintendent of the reformatory, states in his report that "the reformation of the unfortunates committed to the institution has been vigorously prosecuted during the past year." A marked improvement in caring for the bodily and mental health of the inmates has resulted in a lower annual death-rate than in previous years and the improvement of general physique has rendered them more susceptible to reformative measures. Owing to the fact that the inmates come principally from the lowest strata of society they are below the average standard of physique and bodily health, while they are mentally and morally below the normal standard. Very often born of dissolute, pauperised parents such a child is brought up in squalor and dirt, among companions who are equally unfortunate, without a school education as a rule, and therefore without the constitution, training, or education with which to make a proper start in life on arriving at the age of adolescence. "At this age," adds Dr. Robertson, "he frequently runs away and becomes a tramp, or is obliged to leave home and shift for himself," and being thus largely left to his own devices and finding it difficult to obtain a living he soon violates the law and is sent to prison or to the reformatory. Such is the class of youths sent to the Elmira reformatory for the special education and training which are devised to reform them and to make them fit and capable of earning an honest living in the State. The teaching and training undergone include systematic drill, education in reading, writing, and arithmetic from kindergarten to higher grades, and technical and practical instruction in trades and handicrafts suitable to the individual capacity of each inmate. The number who have daily instruction in the "trades school" has varied from 1100 to 1250. Among the trades taught are photography and etching, applied electricity, mechanical engineering and fitting up steam and other machines, carpentry, bricklaying and building and pattern making. Printing and bookbinding are also taught, and the excellently printed and bound illustrated volume of the report before us shows that the grade of skill attained in this department is high. Moral and religious teaching of a non-sectarian character occupies an important place in the scheme of education. The health of the institution was very good during the year, the total number of deaths being seven. The annual death-rate in recent years has been, in fact, much less than the normal death-rate among the general population of the State. The aim of the reformatory is to receive under sentence from the law courts a certain class of convicted youthful criminals and to return them to the community as intelligent non-criminal young men prepared to take places in the mechanical trades above the lowest ranks of labour. It involves the education of the inmate in a trade, in letters, and in conduct and presupposes that he has the capacity for such education. About one-fifth of the inmates, however, are found to be mentally defective in such a degree as to be incapable of more than slight improvement. The majority of the inmates, however, prove successful in achieving a moderate, and some few even a high, degree of skill in a trade and after discharge from the institution take their place among competent workers and wage-earners in the State. The report is valuable and highly interesting and deals with one of the most important social problems of the day.

LUNACY AND ALCOHOLIC EXCESS: A GROWING SOCIAL EVIL IN SCOTLAND.

THE alarming growth of lunacy in Scotland and especially of those forms of it attributable to alcoholic excess has moved the municipal authorities of Glasgow to appoint a special committee to inquire into, and to present a report upon, this matter. A copy of this report, which is now before us, dated April 27th, 1903, furnishes serious matters for consideration. The committee records with concern the fact that of 565 admissions to the Glasgow district asylums at Woodilee and Gartloch and 213 admissions to the observation wards of the poorhouses during 12 months no fewer than 259, or 33 per cent., have been traceable to alcoholic intemperance. The inquiries made by the committee and by the medical superintendents of the asylums show that want and privation were not elements in the production of these cases of alcoholic insanity, for in the large majority of instances the home conditions and surroundings were good and the earnings in 19 typical cases were from 19*s.* to 60*s.* per week. "It is beyond question," adds the report, "that a large number of the insane sent to the asylums in previous years and still inmates thereof are cases of the same nature, so that the question calls for the earnest consideration of the Government and the public." The committee accordingly has forwarded copies of its report to the Secretary of State for Scotland, the General Board of Lunacy, the town council, and the press. The condition referred to in the report is unfortunately not an isolated or exceptional one, for a perusal of the reports of the Royal Edinburgh Asylum during the past few years bears out the same conclusion as regards alcoholic insanity in the capital of Scotland. The growth of lunacy in a ratio rather more rapid than that of the growth of the general population of the United Kingdom may now be regarded as a fact fairly well established, while it is also noteworthy that alcoholic insanity has been increasing on the whole somewhat rapidly during the past two or three decades in great cities and industrial centres. The whole problem, however, is a very complex one and so fraught with difficulties that much more light and knowledge are needed on the matter before any definite proposals, legislative or otherwise, can be recommended for dealing with this grave social evil.

THE LESSON OF THE GREAT MOTOR-CAR RACE FROM PARIS TO MADRID.

"IT'S the pace that kills" was surely never more painfully illustrated than in the series of disasters which took place in connexion with the great motor-car race from Paris to Madrid. The pleasure derived from driving a motor-car for many hours at a speed of anything over 60 miles an hour is one which is a little difficult to understand and which can only be realised with grave risk to the public at large. We need not enter into particulars but may record the fact that all possible types of accident occurred, resulting in four deaths of *chauffeurs*, serious injuries to six or seven participators in the race, and at least four deaths amongst the spectators. Motor-car racing is thus shown to be a danger alike to driver and to pedestrian. Much as the catastrophes must be deplored there can be but little doubt that they have carried a most striking lesson to the whole civilised world. High speeds cannot be tolerated on the highway so long as that highway is the common road for foot travellers and horse-drawn vehicles—and we are bound to add for animals of a more or less domesticated type, for who can be held responsible for the stray dog?—indeed, in the race referred to one of the motor-cars ran over a dog so that the car swerved and dashed into a tree, the *chauffeur* was killed, his companion badly injured, and the car smashed to pieces. As well might we expect it to be safe to allow a coach-and-four or a market cart to drive along the track of the London and North-Western Railway as far as Crewe. What control over a motor-car travelling at the rate of an average speed of 60 miles an hour can a driver be expected to possess when he suddenly encounters a big stone, a curve in the road, or something crossing his path at a cross road? In this country it would be mathematically impossible to take some of the curves of our high roads safely. The question is not what the motor driver is able to do with safety to himself but how far his operations should be controlled in the interest of the safety and comfort of the public. Drivers of motor-cars cannot be allowed to claim privileges which are not possessed by other users of the road. The interests of the public generally are the first consideration. The designers of the roads as originally made and maintained did not contemplate such a class of traffic as motor-cars and there are very few sections of English highways on which an average speed of 60 miles an hour could be permitted with safety. The English high-roads are seldom uniform in width, surface, or direction; indeed, it is constantly forgotten that after all England is a small island through which it is impossible to construct roads of the uniform straightness and width of the *via nazionale* of the Continent. We must not be taken to say that this fact is an absolute argument in favour of banishing motor-cars altogether from our highways, but we do urge that motor-car owners and drivers should possess their souls in patience until some sort of a compromise is effected which will adapt the roadway equally for all. The road must not be, can never be, a monopoly. We bear in mind the fact that in this country we have as far as possible kept the motor-racing instincts from having outlet on our highways; nevertheless, it must be admitted that in spite of this some ugly accidents have arisen. The motor bicycle already has been resorted to as a source of competitive struggle as regards speed on special tracks. In such a competition two persons lost their lives and several others were injured, the race being a comparatively short one, at Bristol last week. We are aware that something may be said against the placing of a legal limit upon the speed of motor cars, but it is necessary to bear in mind that those who can indulge in motor-car riding are an infinitesimal number compared with those who do not care, or else cannot afford, to do so, and the safety of the lives and the limbs of the public is the matter of first consideration. We venture, therefore, to think that the proposal to withdraw the speed limit is a dangerous one despite the fact that all responsibility is to be fixed upon the motor-car driver. Impending legislation should be directed, if possible, not to the extinction of the comparatively new, popular, and what will some day be a valuable, means of locomotion, but against its abuse, and we cannot resist the impression that a system of graduated speeds according to circumstances could be fixed which would place no undue restraint upon the motor-cars and which at the same time would afford reasonable protection to those who employ ordinary means of locomotion. Above all the mania for excessively high speeds must be discountenanced, at any rate, while high-roads are as they are, just as the "scorching" cyclist was very properly "scotched" a few years ago. Trials of speed are certain to bring discredit upon the motor industry which, presumably in its own interests, initiated them.

THE CYTODIAGNOSIS OF AFFECTIONS OF THE SPINAL CORD, WITH SPECIAL REFERENCE TO TABES DORSALIS.

MUCH attention has been given by neurologists during the past three years to the clinical study of the cerebro spinal fluid and the subject of the cytodiagnosis of affections of the spinal cord. A valuable account of the facts ascertained and the results achieved in these respects in cases of tabes dorsalis, general paralysis, and other nervous affections is published in the *Revue Neurologique* of March 30th, the chief contributors being Professor Brissaud, Professor Widal, Dr. Pierre Marie, Professor Babinski, and Dr. Gilbert Ballet. In the first of these communications Professor Widal, Dr. Sicard, and Dr. Ravaut stated that since Babinski and Nageotte had reported their collected observations on the cytodiagnosis of 26 cases of tabes in May, 1901, much work has been done on the subject. These two authors had stated that a more or less marked lymphocytosis was present in the cerebro-spinal fluid in 25 out of the 26 cases examined. Since then Professor Widal and his colleagues had examined the cerebro-spinal fluid in 37 cases of tabes dorsalis, both of recent origin and of long standing, drawn from the wards of Professor Raymond and others. Lymphocytosis was observed in all these cases except one. In 30 cases the lymphocytosis was distinctly confluent and in six it was discrete. In all these cases the lymphocytes were sufficiently numerous to enable at least from six to 10 to be counted in each field of the microscope according to the technique pursued by the authors. These lymphocytes were the most numerous cellular elements present in the cerebro-spinal fluid, but sometimes large cells, which were difficult to classify as mononuclears or as endothelial cells, were also met with. The technique consisted in drawing into a sterilised tube a small but fixed quantity of the fluid which was immediately centrifugalised for ten minutes. The supernatant fluid was decanted and the sediment was transferred by a fine pipette to a glass slide and allowed to dry at a temperature of 37° C. The specimen was then fixed in a mixture of equal parts of alcohol and ether, stained with hæmatoxylin and eosin or with thionin, and examined under the microscope. In normal cerebro-spinal fluid lymphocytes are altogether absent or exceedingly rare. In tabes dorsalis they are abundantly present, as also in meningeal tuberculosis, syphilitic meningo-myelitis, and in general paralysis of the insane. "Their presence is an indication of a simple process of irritation." The presence of polymorphonuclear leucocytes indicates a state of congestion or inflammation, as these elements come only from the blood-vessels by diapedesis. In syphilitic patients the occurrence of hemiplegia is followed by the appearance of lymphocytes in the cerebro-spinal fluid and the same appearance results from the growth of cerebral and spinal tumours which irritate or involve the meninges. On the other hand, in hysteria, epilepsy, neurasthenia, and typical polyneuritis there is no such lymphocytosis. "The virus of syphilis seems to have a predilection for attacking the meninges" and producing lymphocytosis. Professor Brissaud and Dr. Buandet stated in their communication that they had examined eight cases of tabes dorsalis. Seven of these were of three years' duration or less, and in all there was distinct or marked lymphocytosis. In the eighth case of tabes of 20 years' duration there was a feeble degree of lymphocytosis. Professor Babinski stated that he had examined 10 cases of tabes dorsalis and seven of general paralysis of the insane and that moderate or marked lymphocytosis was present in every case without exception. Dr. Gombault had examined 11 male and eight female cases of tabes dorsalis. In eight of these 19 cases there was abundant and confluent lymphocytosis, in two it was moderate, and in one it was absent. These last three were non-syphilitic cases of tabes. Dr. Gilbert Ballet had examined eight cases of tabes dorsalis, in five of which lymphocytosis was present. A similar condition was met with in six out of eight cases of general paralysis of the insane. Dr. Pierre Marie had examined 20 cases of tabes dorsalis of from two to 25 years' duration. In six there was abundant lymphocytosis, in 10 there was more than a moderate amount, and in three there was moderate lymphocytosis. Dr. Souques examined three cases of tabes dorsalis, in all of which abundant lymphocytosis was present The consensus of observations made by the various investigators above named tends to establish the great diagnostic value of cytodiagnosis in organic affections of the spinal cord and goes far to show that a syphilitic causation is pre-eminently a factor in the production of lymphocytosis in the cerebro-spinal fluid.

ASPARAGUS.

CLOSE upon 100 years ago—to be exact, in the year 1805—a crystalline body since called "asparagine" was first extracted from the young shoots of asparagus, which proved to be of physiological importance. Asparagine is not, however, peculiar to asparagus, it is present also in beetroot, potatoes, the shoots of peas, beans, and vetches. Although asparagine contains more than a fifth of its weight of nitrogen, yet it is probable that it has no direct nutritive value. There is reason for believing, however, that it materially aids nutrition by promoting the absorption of proteids and carbohydrates, and it also has a tendency to counteract putrefaction in the intestine. So far, however, asparagus shows no physiological or dietetic advantage over other succulent vegetables which all contain asparagine in common. Nor *is the nutritive value of asparagus greater than that of* other tender vegetables. Over 90 per cent. of asparagus is water, the rest being made up of a small proportion of fat, carbohydrate, woody matter, and mineral substances. Asparagus is probably a valuable source of mineral salts which promote a healthy alkaline condition of the blood and is also a distinct anti-scorbutic. It is doubtful, however, whether asparagus possesses any dietetic superiority over the common cabbage, seakale, or spinach, or other green vegetable so long as these are tender, while it is decidedly less nutritious than the potato. But it is the æsthetic qualities of asparagus which make it so acceptable, an agreeable flavour playing an important rôle in the great nutritive processes. As is well known, an improved appetite and a relish for food increase the activity of the digestive function

THE DISTRIBUTION OF PLAGUE.

As regards the Cape Colony the acting medical officer of health states that for the week ending May 2nd the condition of the various places mentioned below was as follows: At the Quarantine Station, Saldanha Bay, 2 Asiatic males remained under treatment in the hospital, both being convalescent At Port Elizabeth 4 cases of plague have been discovered—namely, 1 European female (found dead), 1 native male on April 28th, and 2 native males, one of whom was found dead, on May 2nd. At the Plague Hospital, Port Elizabeth, 1 European male, 1 coloured female, and 1 native male were discharged cured during the week, leaving 13 cases under treatment. Plague-infected rats continued to be found in the town during the week. At East London 2 cases of plague were discovered during the week—namely, 1 native male on April 30th and 1 native female on May 2nd. At the Plague Hospital a native male died during the week, leaving 2 cases under treatment. At King William's Town 4 cases of plague were discovered during the week—namely, 1 native male on April 26th, 1 native female on the 27th, 1 native male (found dead) on the 30th, and 1 European female on May 2nd. At the Plague Hospital 1 native male and 1 native female died during the week, leaving 5 cases under treatment At Graaff-Reinet and Burghersdorp no cases of plague and no plague-infected rats were found during the week, but at Queenstown plague-infected rats were discovered at the railway goods-shed. As regards the Mauritius, a telegram from the Governor received at the Colonial Office on May 22nd states that for the week ending May 21st there were 2 cases of plague, of which 1 proved fatal.

HUDDERSFIELD WORKHOUSE NURSING.

IN order to render less inefficient the nursing of the sick poor in workhouses a departmental committee recently recommended that a superintendent nurse should be appointed who should have general control of the sick wards instead of the master and who should exercise with the master a dual control over paid and pauper servants. These suggestions have been under the consideration of the Huddersfield board of guardians and a committee has proposed certain modifications which serve to call attention to the difficulties of the position but do little towards overcoming them According to the scheme of the board the master or matron is to be in charge of the whole establishment, including the sick wards, and is to be intrusted with the duty of reporting to the guardians any neglect on the part of the superintendent nurse. The nurse, however, is to be responsible to the medical officer for the welfare and nursing of the sick. The matron is to look after the cooking of food for the sick and their nurses and after the making, mending, and washing of clothes and linen for the use of the sick. Stated broadly, the position will amount to this—the *matron will be at once the superior officer of the* superintendent nurse and her cook and washerwoman. As compared with the matron the superintendent nurse will almost of necessity be a woman of higher education and quite possibly, outside the workhouse, of higher social grade. Moreover, the matron will be very frequently the wife of the master. Clearly, then, the opportunities for bickering and friction already available will be considerably increased and it is too much to hope that they will not be utilised. Stress is very properly laid by the Huddersfield board upon the desirability of separating the sick wards, and incidentally the superintendent nurse, from the main building and its guiding spirit, the matron; but this would be only a partial remedy. The only rational plan is to make the superintendent nurse responsible to the medical officer and to him alone. This is an arrangement which a nurse is accustomed to and understands, and it is one which experience has shown—for instance, in the case of the infirmaries in London—to be advantageous to all concerned.

THE DIRTY FOUNTAINS IN TRAFALGAR-SQUARE.

A FOUNTAIN is associated in most people's minds with the idea of purity, as something that is clear, bright, and sparkling, and as a matter of fact its function may be considered to be threefold: in the first place a fountain of water is pleasing to the eye; in the second place it cools the air; and in the third place it exercises certain important purifying effects upon the air. The fountains of Trafalgar-square, however, according to our examination possess none of these qualifications; indeed, quite the reverse would appear to be the case. For example, on the eighteenth day of the present month we observed that the temperature of the air in the square averaged 54° F., while the water of the fountains at the same time showed a temperature of over 72°. It seems pretty clear, therefore, that the water of the fountains is relatively speaking, warm and we have noticed on several occasions on a cool evening a cloud of vapour over the surface of the pools such as would be given off by warm water in a cold place. The fountains therefore are not likely to have a cooling effect upon the air. Next it may be observed at the point where the stream of water takes a curve outwards that the water is always of a dirty greenish-yellow colour. The indications so far are that the water is not as clean as it might be. Why it is warm we do not know unless it consists of the exhaust water from a steam-engine, or, as has been suggested, the waste water of some adjoining public baths or laundry. Subsequently we considered that it would be interesting to make a chemical analysis of the water and the results ultimately obtained were as follows: total solid matters, 42·00 grains per gallon; inorganic residue, 35·00 grains per gallon; chlorides, calculated as common salt, 12·70 grains per gallon; total hardness as calcium carbonate, 6·40 grains per gallon; free ammonia, 0·0084 grain per gallon; albuminoid ammonia, 0·098 grain per gallon; nitrates, *nil;* nitrites, traces; and phosphates, distinct traces. On evaporation the water yielded a dirty-looking residue which charred strongly on heating, giving off at the same time a bad smell. Microscopical examination showed pond-water organisms, epithelial scales, and fungus mycelium. The colour of the water was a dirty yellowish-green The specimen which we obtained on being kept in a closed bottle developed an offensive musty odour and became opalescent in a few days A water showing such results as these would, of course, be unhesitatingly condemned for drinking purposes. We maintain, however, that it is desirable from a public health point of view that the water of these fountains should be as pure as that of a drinking supply. We have seen it stated, by the way, that there are artesian wells at Trafalgar-square which supply the Houses of Parliament. We hope that the source of this supply is not identical with that of the water used for the fountains in Trafalgar-square or if so that it is not used for drinking purposes by Members of Parliament. The water is both chemically and physically dirty, exhibiting a strong degree of pollution if judged by a drinking-water standard. It is not unreasonable to suggest that the spray blown about by the wind might easily be inhaled by the passers-by with mischievous results. Surely it is not too much to expect that what the great Sir Robert Peel called "the finest site in Europe" should be provided with fountains the water of which is absolutely free from reproach. We have often pointed out that water in its passage through air, as in the case of rain, plays an important function: the air is cooled, cleaned, and freshened. We are certain that nothing of the kind can be effected by the dirty waters of the Trafalgar-square fountains at the present time; on the contrary, the air is more likely to be vitiated by their action.

LUNACY IN SCOTLAND.

THE forty-fifth report of the Commissioners in Lunacy for Scotland, issued in February, 1903, states that on Jan. 1st, 1903, there were in Scotland 16,658 insane persons under the official cognisance of the commissioners Of these, 2416 were private patients maintained from private sources, 14,191 were maintained by parochial rates, and 51 at the expense of the State. As the total number of lunatics on Jan. 1st, 1902, was 16,288, an increase had taken place during the year 1902 of 370. A review of the statistics from 1858 to 1903 shows that when the Board of Commissioners in Lunacy entered on its functions in 1858 the total number of lunatics officially known to the board was 5824, showing an increase of 10,834 during the subsequent 44 years ending Dec. 31st, 1902. In other words, since 1858 the number of lunatics under the jurisdiction of the board has increased by 186 per cent. The increase of the population during the same period has been 50 per cent. The average annual increase of pauper patients in establishments during the past 10 years has been 300. During the past year the increase was 374, being 74 in excess of the average. In the year 1893 the proportion of pauper lunatics to the population in Scotland was 240 per 100,000. This proportion, however, has been steadily rising since then and stands now at 250 per 100,000. The number of pauper lunatics in private dwellings has increased during the past ten years from 2519 to 2642. The proportion to population of private patients under care in private dwellings has remained unchanged for many years. Among lunatics are included imbecile children in training schools, but the number of the children is the same as in the previous year. The number of private patients admitted to institutions during the year was 548, being ten more than in the preceding year and six more than the average for the quinquennium 1895-99. The number of pauper patients admitted was 3113, being 151 more than the number during the preceding year and 374 more than the average for the quinquennium 1895-99. The number of all patients discharged as recovered from institutions during the year amounted to 1620, or 12·2 per cent. of the average number resident. The deaths during the year amounted to 1201, or 9·1 per cent., as calculated on the same basis. An elaborate inquiry into the extent and distribution of insanity in the various shires and districts of Scotland correlated with the census returns of 1901 shows that the proportion to population of persons of unsound mind varies very greatly, the highest proportion being in Argyll and the lowest in Dumbarton. The ten highest proportions stand in descending order as follow: Argyll, 842 lunatics per 100,000 population; Sutherland, 775; Ross and Cromarty, 767; Nairn, 745; Caithness, 720; Inverness, 705; Orkney, 680; Shetland, 675; Bute, 650; and Perth, 602. A study of the returns shows that at the top of the list stands without a break "the whole Highland and insular region of

Scotland, mainly rural and non-industrial," and at the foot stands "central Scotland, which is mainly urban and which whether urban or not offers the best field for those in search of employment." As the result of elaborate collation and comparison of facts the commissioners conclude that the somewhat startling result is shown that where alcoholic excess and other forms of vice are with good reason supposed to be least common and where life is most free from worry, strain, and excitement insanity is most prevalent (as in the ten districts above mentioned) while, on the other hand, where drink, vicious living, worry, and stress are all at their highest—viz., in the counties of Fife, Ayr, Lanark, Stirling, Renfrew, Linlithgow, and Dumbarton—the prevalence of insanity falls to the lowest point. A closer consideration of the facts and circumstances affecting these two extreme groups tends, however, to raise doubts as to whether the southern group possesses inherently all the advantages in respect to sanity which the bare figures seem to give it, while support is lent to the view that the evil effect of the intermarriage of predisposed persons is to a large extent an important factor in the prevalence of insanity in the northern group.

PRESERVING EGGS WITH SILICATE OF SODA.

MORE than once in these columns we have drawn attention to the excellent method of preserving eggs by means of submerging them in a 10 per cent. solution of silicate of soda or water-glass. Several readers have since written to us asking for further information as regards the practical details of the method. We believe the following plan gives quite satisfactory results. One pound of water-glass (which can be obtained from the pharmacist) should be carefully dissolved in one gallon of cold water. It will take some time to incorporate the treacly silicate with the water but the mixing must be done thoroughly. The solution with the eggs placed in it should be kept in an earthenware glazed jar. The eggs should be packed point downwards and completely submerged. Any loss of the solution by evaporation should be made up by adding a little water from time to time. Should any of the eggs float a common dinner-plate should be sunk below the surface of the fluid so as to rest inverted on the eggs. The shell should be pierced just before the egg is boiled, otherwise the egg might burst. The plan is so simple and effectual, eggs keeping as good as fresh for close upon a year, that there is no reason why it should not be universally adopted, more especially when eggs are plentiful and cheap.

THE CONTROL OF INEBRIATES.

THE recently published report of the Dalrymple Home established by the Homes for Inebriates Association is instructive and on the whole encouraging. From a summary of results obtained since the home was opened 19 years ago it appears that 679 persons have been under treatment during this period, the average term of residence being six and a half months. Of these 679, 241 are stated to be now doing well and 100 to have improved. On the other hand, 203 have not improved, while particulars are wanting as to 78. Nine have become insane, 48 have died, and 83 have been re-admitted. Thus, while we are unable from the data before us to decide how much, if at all, the total of success absolutely exceeds that of failure, the proof, so far as it goes, indicates a margin on the right side. At all events we have the assurance that about a third of the cases treated have resulted in more than transient amelioration. When viewed in its domestic relation the benefit which these figures illustrate is magnified. The advantage to the inebriate, desirable in itself, is a small matter in comparison with the present comfort and the future hope which even his mere absence implies for those of his family circle. In the event of his reformation the gain to all concerned is incalculable. So far the provision made by legislation for the restraint of the drunkard is limited (1) to the case in which he is himself willing for a time to endure the loss of liberty; and (2) to the case in which he has forfeited this by conviction in a court of law. There is, however, another and a much larger class of inebriates who are not controllable on either of these grounds and who are yet undoubtedly and habitually drunken and in whom apparently there exists no inherent remnant of the curative will-power. The right of personal freedom is surely no privilege but a wrong to such persons and through them a wrong to society. It has become practically an obstacle to their recovery by means of that salutary restraint from without which is one of the most trustworthy remedies, if not the only one, revealed to us by experience It is worth considering whether there should not be applied to the treatment of such cases in this country some system akin to the French *conseil de famille*. There is little likelihood of abuse under such an arrangement, carried out as it would be under supervision of the magistracy.

THE annual meeting of the Medico-Psychological Association of Great Britain and Ireland will be held on July 16th and 17th and not as previously announced. The meeting will be held at 11, Chandos-street, Cavendish-square, London, W.

THE foundation-stone of the Winsley Sanatorium will be laid by Lady Dickson Poynder on Thursday, June 4th, at 3.30 P.M. The nearest railway station to Winsley is Limpley Stoke on the Great Western Railway.

OWING to the great pressure on our space this week caused by the report of the proceedings of the General Medical Council we are compelled to postpone the publication of several important communications.

LEPROSY AND FISH-EATING.

THE discussion on the address by Mr. Jonathan Hutchinson on the results of his recent journey to India for the investigation of leprosy was held at the Medical Graduates' College and Polyclinic, Chenies-street, London, on May 21st

The chair was taken by Dr. H. RADCLIFFE CROCKER and the proceedings commenced by Mr. JONATHAN HUTCHINSON pointing out that the standing committee on leprosy of the Medical Graduates' College and Polyclinic should institute an inquiry by means of systematic correspondence into the question of the causation of leprosy by eating fish. He thought that if such a correspondence were instituted it would be found that wherever Roman Catholic missionaries were successful there leprosy was abundant. He asked if leprosy was a disease spreading from person to person why it should pick out the Christians in India out of all proportion to the Hindoos. It must be because of the change in the kind of food eaten and that must be the fish.

Mr. M. I. FINUCANE (late of Fiji) stated that in his opinion leprosy might be caused by other agencies than the eating of fish and he instanced the dirt and filth in which the coolies in Fiji lived. He supported Mr. Hutchinson in regard to the insanitary conditions of life that accompanied the conversion of natives to Roman Catholicism He thought that the standing committee of the Polyclinic on leprosy should take up the matter of the segregation of lepers, for upon that point the Government was continually pressing medical officers concerned for advice and direction.

Dr. H. D. MCCULLOCH (Secunderabad) said that in Cashmere there were two great classes of people—those who lived in the valleys, whose diet consisted of fish, and those who lived a nomadic life on the *mountains living* chiefly on a vegetable diet. He asserted that it was an almost impossible thing for the mountaineers to procure fish, as suggested by Mr. Hutchinson, but it was from this class that cases of leprosy came and not from the people who lived in the valleys and ate fish throughout the year.

Dr. P. S. ABRAHAM, after complimenting Mr. Hutchinson on the work he had done, proceeded to give in detail his reasons for dissenting from the conclusions arrived at by Mr. Hutchinson He produced some cuttings from the daily papers in which it was stated that Mr. Hutchinson had declared that on the whole the commission on leprosy had reported favourably on his fish theory of the causation of leprosy.

Mr. HUTCHINSON stated that what he said was that because the commission on leprosy found patients in the leper asylums who said they had not eaten fish, therefore the commission had reported somewhat unfavourably upon his fish theory, but he still contended that the commission on the whole was favourable to it in spite of its somewhat adverse verdict.

Dr. ABRAHAM expressed his opinion that Mr. Hutchinson ought to put the misunderstanding right in the press because on p. 339 of the report of the commission it was distinctly stated that in the opinion of the commission there was no doubt that the consumption of fish was not the cause of leprosy.

Dr. C. J. S. HANCOCK (Assam) communicated some interesting details concerning the consumption of fish by all classes in Upper Assam.

Dr. C. AFFLECK discussed the question of leprosy in Scotland in the Middle Ages and gave in some detail the opinions of his medical teachers concerning Robert Bruce and other matters. He advised the committee to seek for an elucidation of the question by investigating the fish theory.

Dr. CROCKER said that undoubtedly the whole subject depended upon the demonstration of the lepra bacillus in fish and until that was done he could see but little use in prolonged discussions except in so far as they tended to lead investigators in the direction of seeking for the lepra bacillus.

Mr. HUTCHINSON, in reply, deprecated the contention of Dr. Crocker that to prove his fish theory the bacillus must be demonstrated in the fish, because he thought that many things could be, and were, proved before they were actually demonstrated. In respect to the Cashmere mountaineers he explained that the circumstances were somewhat similar to those noticed in South Africa, where the labourers up country who subsisted on salt fish contracted leprosy, but the fishermen at Cape Town who supplied the fish were practically exempt, the explanation being that they consumed the fish when it was fresh and wholesome.

The meeting then terminated.

THE ASSOCIATION OF CERTIFYING FACTORY SURGEONS.

THE gatherings of the Certifying Surgeons' Association have usually taken place in the Midlands. This year, however, a well attended dinner was held in London at the Hotel Cecil on May 22nd. Considerable regret was felt at the enforced absence of the Home Secretary who had accepted an invitation to be present, but among the guests of the association were numerous representatives of the Home Office connected with the Factory Department, and Sir Kenelm Digby, Permanent Under Secretary of State for the Home Office, filled the seat that Mr Akers-Douglas should have occupied. Dr. T. F. Young of Liverpool, President of the association and chairman of the dinner, after the usual loyal toasts had been drunk proposed "The Home Department of His Majesty's Government," and referred in his speech to the progressive nature of the work instituted under, and forwarded by, the Factory Department of the Home Office, making a happy reference to the wealth of a nation consisting in the numbers of its healthy population He alluded to Dr. B. A. Whitelegge, chief inspector of factories, who was present, as one of the greatest public benefactors whom he could name. In his reply on behalf of the Home Office Sir Kenelm Digby dwelt upon the great and increasing development of the Factory Department and upon the far-reaching effect of the work done throughout the kingdom by the certifying surgeons, not only in populous manufacturing districts but in others where there were few factories and considerable distances had to be traversed by those responsible for the health of the workers in them. Professor C. J. Wright of Leeds proposed the toast of "The Factory Department of the Home Office," coupling with it the name of Dr. Whitelegge which was received with well-deserved enthusiasm. Dr. Whitelegge, in replying, spoke of the enormous growth of the department under his supervision, to the spread of its jurisdiction from land to water, from docks to harbours, and made a good point when he expressed regret that although accidents that took place were recorded no statistics could show the number of accidents prevented. In replying to the toast of his own health, which Dr. Whitelegge had proposed, Dr. Young referred to the difficulty which met the certifying surgeon when he knew that an opinion adverse to the employment of a young person at a factory might mean loss of all power to earn a livelihood. He exhorted his hearers to let their humanity influence them in such cases wherever doubt arose and pointed out that the boy who was unfit owing to physical infirmity for a particular duty for which he had been engaged, might still be found work in some other part of the same factory in different circumstances, if the certifying surgeon would explain to the employers the nature of the work likely to prove injurious to him.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

THIS society held its annual meeting at 11, Chandos-street, London, on May 20th, and the opportunity was taken by Mr. Christopher Heath, who occupied the chair, to draw the attention of the profession to some important points in connexion with the advantages offered by the society. After congratulating the members on the excellent financial position of the society Mr. Heath proceeded to explain how much good the society was doing and how much more it could do if its benefits were more generally appreciated by medical men. The best proof of what might be done could be gathered from a study of the voting-paper issued by the Royal Medical Benevolent College for the forty-ninth election of pensioners and foundation scholars. On looking through the list of candidates for the five vacant pensions to see how many of the applicants would have been eligible to receive benefit under the rules of the Society for the Relief of Widows and Orphans of Medical Men, Mr. Heath noticed that there was an application from the widow of a medical man who had practised for nine years in Battersea and Queensland. That widow was 63 years of age, with very limited means, but if her husband had taken advantage of the benefits of the society she would have received immediate assistance, because the fact that her husband had died in Queensland would not have rendered [illegible] relief. Curiously enough, two [illegible] had to deal with a very similar [illegible] usband had died in Australia, [illegible] ily; happily for the widow, before that gentleman went out to Australia he had become a subscriber to the Society for the Relief of Widows and Orphans of Medical Men and had kept up his subscription. The society granted that lady £50 a year and an allowance for each of the children, the total amount that she received annually from the society being £125. This case certainly served as an excellent example of the benefits that any medical man might secure for his family by joining the society and paying two guineas yearly.

It was worthy of the widest circulation that a life-membership of the society could be secured by the one payment of 20 guineas up to 30 years of age, 25 guineas up to 40 years of age, and 30 guineas after that. It was certainly a matter of regret that in spite of this admirable means of making timely provision for widows and orphans, so few medical men were found availing themselves of this opportunity of discharging a part of their duty [illegible]. Mr. Heath referred to th [illegible] affliction applying to the R [illegible] and pointed out that it wa [illegible] thing that happened every year. The Society for the Relief of Widows and Orphans of Medical Men had no power to make any grant whatsoever except to the widows and children of those who had been subscribers, but it was only too happy to relieve the wants of the widows and orphans of those gentlemen who had taken the opportunity of becoming members of the society and had fulfilled the conditions required by the regulations. The society was in the possession of the necessary funds and no one entitled to relief was ever sent away because there was no money available. Pecuniary resources were at the disposal of the society in abundance; its funds were large and well invested.

Mr. S. Felce, a vice-president of the society, remarked that for a medical man to say he would not join the society because it did not need assistance and because he thought his wife and children were never likely to want, was an argument that was not borne out by the facts of everyday life, for it was a matter of common knowledge that misfortune might happen to the most prosperous, and no one knew when those near and dear to him might need assistance.

MEDICINE AND THE LAW.

The Dying Declaration.

At the trial for murder of a man named Bottomley at Liverpool considerable discussion seems to have taken place as to the admissibility of statements made by the woman whose death he had caused. He was charged with killing her by procuring, or attempting to procure, abortion and in these cases, where the woman is not infrequently attended by a medical man before death takes place, this question of statements made by the patient often arises and medical men should be aware of it. In cases of homicide it is the practice to admit testimony as to the dying declarations of the deceased with respect to the cause of his death, it being first shown that such declarations were made under a sense of impending dissolution. It is for the judge to be satisfied that the deceased when making the statement had a "settled hopeless expectation of death" before he admits the evidence. In all cases—that is to say, in other cases as well as in those of homicide—depositions of a deceased witness may be read, but these have to be properly taken in the presence of a magistrate and with the observance of other formalities which need not be gone into. The dying declaration, as it is usually called, is simply the statement of a person who with the expectation of death before him would not be likely to say what was not true. It is right in such a case for anyone present who can do so to make immediately an accurate note of what the deceased said and to include in the note any question which may have evoked the statement thus made. A note should also be taken of anything said by the deceased which bears on the question of his knowledge that he is dying.

The Word of a Medical Man.

The *Times* report of the recent trial of seamen for the murder of their officers on board the *Veronica* contained the following passage: "Yesterday the resumption of the trial was delayed owing to the illness of a juryman. A new juror was eventually sworn and the evidence was read over. There is precedent for procedure of this kind even in a murder trial,...... but the more usual and, indeed, the correct, course appears to be that the illness of the afflicted juror and his incapacity to serve should be proved on oath in open court and not taken for granted on the bare assurance of a doctor." Writing in the *Times* of May 16th Sir Herbert Stephen, clerk of assize for the Northern circuit, emphatically contradicted a statement which is certainly not in accord with the experience of most medical men. Sir Herbert Stephen wrote: "The only purpose of an inquiry by sworn evidence as to the missing juryman's condition is to ascertain whether anyone ought to be made penally responsible for the separation of the jury. There was no reason in this case for any such inquiry." A medical man is sworn to give evidence where an issue is being tried and he then gives evidence like any other witness. There are occasions, however, when no oath is required and the word of a member of a learned and honourable profession is accepted without question. The statement of a barrister is also accepted on many occasions in courts of law, although as a witness he is put upon his oath like anyone else. The authority of Sir Herbert Stephen, who wrote as clerk of assize of the Northern circuit, will be sufficient to satisfy everyone that the correct procedure was adopted on the occasion in question.

Unqualified Practice.

A man named Thomas Dixon was summoned recently before Mr. Denman at Marlborough-street Police-court and fined £10 with £10 10*s*. costs, or in default two months' imprisonment, for an infringement of the Medical Acts. It was proved that he had examined the pulse and tongue of a witness (who was a clerk in the office of the solicitor to the Medical Defence Union and had nothing the matter with him), had sold him a bottle of medicine, and on being asked to give a certificate had signed it "Dr. R. Cowen." Mr. R. J. Cowen of 25, Clarges-street, W., stated that the defendant had been his assistant and had been discharged for acting in his absence in the way in which he had. As the only defence seems to have been an appeal in mitigation of punishment to the effect that the defendant had been employed as an assistant to medical men for 18 years, but was "one of the unfortunate ones who had not succeeded in passing his examination," the penalty inflicted does not seem excessive. If the public are to be treated by unfortunate ones who cannot pass their examinations they are at all events entitled to be protected against being misled by any pretence of qualification.

A Judge upon the Sale of Pistols.

At the recent trial of a young man named Platell at the Old Bailey for a murder committed at Blackheath the medical evidence bearing upon the prisoner's mental condition was conclusive and the jury found him guilty but insane at the time of the commission of his act. He appears to have bought a revolver and 50 cartridges at a pawnbroker's shop for 10*s*. 3*d*. and to have proceeded the same night to shoot at, and to wound, a policeman at close range, afterwards shooting at, and killing, an unfortunate man who, joining the hue and cry, sought to apprehend him. A Mrs. Jennings, who had refused to sell the prisoner a revolver earlier in the evening because she believed him to be drunk, was warmly commended by the judge. On the other hand, the pawnbroker who afterwards sold the fatal weapon is reported to have been thus addressed by Mr. Justice Grantham: "In my judgment you ought to be in that dock charged with manslaughter. When a man loads a revolver for another who is drunk and that person goes and shoots another it is a serious question whether the man who loads the revolver is not guilty of manslaughter." This may be the case, and no doubt if the pawnbroker had any reason to believe that his customer was drunk when he asked for the pistol, it is proper that he should be rebuked. At the same time, the mere selling of a revolver for a few shillings to a stranger who may be mad, or a drunkard, or a criminal, is perfectly legal, and so is the act of showing a novice how to load a dangerous weapon. If the law made the whole trade in cheap pistols impossible and only allowed the sale of revolvers to persons able to prove some reasonable claim to possess them many lives would be saved in every year. The Bill at present before Parliament would restrict the sale of pistols to persons producing a 10*s*. gun licence and giving their names and addresses at the time of purchase. Whether this would have affected the case of Platell by preventing the sale to him of the weapon in question depends more upon how much money he had in his pocket than upon anything else. He was of respectable parentage and appearance and under the conditions hitherto existing the issuing to him of a gun licence would have been merely a question of his ability to pay for it.

General Sir Hector Macdonald Memorial.—A gentleman has intimated that when the subscriptions to the London memorial amount to £4000 he will give a donation of £1000 and yet a further sum in proportion to the total amount subscribed. Dr. Farquhar Matheson, J.P., 11, Soho square, W., and Mr. William Grant, St. Mildred's House, Poultry, E.C., the honorary treasurers, will be glad to acknowledge all donations.

Devon and Cornwall Ear and Throat Hospital, Plymouth.—The annual meeting of the subscribers to this institution was held on May 18th under the presidency of the mayor. The financial statement showed a favourable balance of £20, but there still remains a debt of £1200 on the building. During the year a new ward has been added to the hospital. The medical report stated that 851 patients were treated during 1902, compared with 664 in 1901, and that 222 operations were performed.

Looking Back.

FROM

THE LANCET, *SATURDAY*, MAY 28, 1825.

MORE "HOLE AND CORNER" DOINGS.[1]

Comical as we know Mr. Abernethy to be, we did not expect, after we had *concluded* the publication of his lectures, after we had presented the *last* of them to the world, that he would call upon the Chancellor to prevent our *doing that* which had actually been *done* several weeks previously; but it appears that Mr. Abernethy's notion of law is, that it can alter the past as well as the future.

He may possibly have vanity enough to suppose that we shall *reprint* his lectures. On this point his mind may be perfectly at ease; our pages have been already obscured with his hypothetical nonsense during six tedious months, and when we read the proof of the last paragraph we felt relieved as we formerly stated, of a most tolerable *incubus*

This renewed attack is one of a series of legal proceedings which the "Hole and Corner" people long ago resolved upon instituting against THE LANCET, with a view of deterring us from dischargi [illegible] subduing that [illegible] have proclaime [illegible] We have hitherto smiled at their impotent efforts, and smile at them still; for really their imbecility renders them the most ludicrous of opponents. We sometime since alluded to a meeting of certain [illegible] held for the purpose o [illegible] have the effect of *putt* [illegible] tion on this subject was exceedingly loose until Wednesday last, when, having heard it whispered that one or more of those meetings had been held at the Freemasons' Tavern, it struck us that we might, by a little manœuvre, get possession of the secret; knowing how fervently the "Hole and Corner" people worship the molten god, we considered it extremely probably, (as they had met on such a disastrous subject,) that they had forgotten to pay their bill. Now, as the meeting was held on our account, we thought it but right that we should go to the landlord of the tavern—ask how matters stood, and, if unpaid, offer to settle the account.

It is not a little extraordinary that our conjecture was realised. We informed Mr. Cuff's clerk, without any preliminary observation, that we had called to pay the expences of a Meeting of Medical Gentlemen, friends of Mr. Abernethy, which had been held there in December last—"Oh yes, sir, said he, I recollect, one Saturday night in that room."—(Pointing to a room at the bottom of the stairs; a low situation, calculated for *low* company and *low* deeds)—"The account is not settled, we believe?" "No, it is not." "If you will get it drawn out, as we see you are busy now, we will call and pay it in the morning." The following morning we were punctual; obtained the bill, paid it, and presented the waiters with 2*s* 6*d*, for they had been forgotten too One of the gentlemen was so affected that he was compelled to have a coach to take him away. The landlord paid the coachman, which was also forgotten. This *Tavern account* of a Meeting of Gentlemen is really so rare—so choice a morsel, that we must present our readers with a faithful transcript of it:—

Mr. STANLEY,

To J. J. Cuff,

1824.		£	s.	d.
Dec. 27.	To room		15	0
	Paid for coach		1	0
			16	0
	Waiters		2	6
May 25.			18	6

Recd for J. J Cuff,
T. Hoggray

Here was a jovial meeting! Look at the charges for refreshments! Not a solitary glass of Burgundy or of Mr. Cuff's fine old Port. The only thing inquired for was a preserved peach by Mr. Travers, but when that gentleman had made the lateral incision and found that it was *stoneless*, he rejected it with apparent nausea; however upon its being represented to him, shortly afterwards, that one of the waiters had discovered the stone in an old *musk box*, he became somewhat better, and soon after left the room. Mr. Cuff, we should suppose, from the appearance of this bill, cannot wish to have another Medical Meeting. It was a "Hole and Corner" proceeding to the very letter, for it appears, by the bill, that although it took place at the latter end of December there was neither fire nor candle.

Mr. Green, we understood, ordered the room, but who attended besides that gentleman, Stanley, Travers, Brodie, and Vincent, we cannot say. Mr. Stanley, we expect, will [illegible] any little bill, and we have [illegible] grateful to us for having [illegible] specially as the cause for which it was incurred is one which does him and his coadjutors so much honour. We ought to have stated, that this meeting was convened by letter, addressed to nearly all the Hospital Surgeons and Lecturers.

Who can *now* doubt that we have been the objects of a conspiracy, and that these repeated law proceedings are systematic attacks, which it is hoped, (vainly enough, God knows,) will ultimately conquer us?

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 9018 births and 4490 deaths were registered during the week ending May 23rd. The annual rate of mortality in these towns, which had been 17·5, 15·9, and 15·4 per 1000 in the three preceding weeks, rose again to 15·5 per 1000 last week. In London the death-rate was 14·8 per 1000, while it averaged 15·8 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 3·2 in Hastings, 8·5 in East Ham, 8·6 in Hornsey, 9·1 in Handsworth, 9·8 in Walthamstow, in Kings Norton, and in Aston Manor, and 10·0 in Tottenham and in Stockton-on-Tees; the highest rates were 20·2 in Sheffield and in Swansea, 20·3 in Manchester and in Salford, 21·8 in Wigan, 21·9 in West Bromwich, 22·0 in Sunderland, 22·2 in Grimsby, and 24·7 in Huddersfield. The 4490 deaths in these towns last week included 461 which were referred to the principal infectious diseases, against 519, 457, and 428 in the three preceding weeks; of these 461 deaths 146 resulted from measles, 102 from whooping-cough, 66 from diarrhœa, 57 from scarlet fever, 46 from diphtheria, 32 from "fever" (principally enteric), and 12 from small-pox. No death from any of these diseases was registered last week in Hornsey, Hastings, Bournemouth, Reading, Devonport, Burton-on-Trent, Handsworth, Kings Norton, Wallasey, Warrington, Bury, Barrow-in-Furness, or Tynemouth; while they caused the highest death-rates in Great Yarmouth, Hanley, West Bromwich, Smethwick, Oldham, Sheffield, Middlesbrough, Merthyr Tydfil, and Swansea. The greatest proportional mortality from measles occurred in Wolverhampton, West Bromwich, Salford, Sheffield, Middlesbrough, and Swansea; from scarlet fever in Great Yarmouth, Huddersfield, and Merthyr Tydfil; from diphtheria in Hanley; and from whooping-cough in West Ham, Smethwick, Grimsby, Oldham, Sheffield, and Rotherham. The mortality from "fever" showed no marked excess in any of the large towns. Of the 12 fatal cases of small-pox registered in these towns last week six belonged to Liverpool and one each to Leicester, Oldham, Burnley, Bradford, Leeds, and Gateshead. The number of small-pox patients in the Metropolitan Asylums hospitals, which had been 60 at the end of each of the two preceding weeks, had increased to 64 at the end of last week; 19 new cases were admitted during the week, against 12, 17, and seven in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday, May 23rd, was 1759, against numbers increasing from 1662 to 1755 on the five preceding Saturdays; 234 new cases were admitted during the week, against 235, 229, and 236 in the three preceding weeks The deaths referred to diseases of the respiratory organs in London, which had been 283, 260, and 225 in the three preceding weeks, further declined last week to 182, and were 34 below the number in the corresponding period of last year. The causes of 48, or 1·1 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Nottingham, Bolton, Salford, Newcastle-on-Tyne, and in 44 other smaller towns; the largest proportions of uncertified deaths were registered in Hanley, Smethwick, Barrow-in-Furness, Sheffield, and South Shields.

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[1] Excerpt from remarks by the Editor of THE LANCET.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 19·2, 17·9, and 18·0 per 1000 in the three preceding weeks, declined again to 17·2 per 1000 during the week ending May 23rd, but showed an excess of 1·7 per 1000 over the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 13·4 in Dundee and 14·6 in Edinburgh to 18·6 in Glasgow and in Perth and 23·3 in Greenock. The 563 deaths in these towns included 22 which were referred to whooping-cough, 16 to diarrhœa, six to measles, three to diphtheria, three to "fever," and one to scarlet fever, but not one to small-pox. In all, 51 deaths resulted from these principal infectious diseases last week, against 57, 57, and 68 in the three preceding weeks. These 51 deaths were equal to an annual rate of 1·6 per 1000, which corresponded with the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 32, 26, and 25 in the three preceding weeks, further declined last week to 22, of which 13 occurred in Glasgow, three in Edinburgh, three in Greenock, and two in Leith. The deaths from diarrhœa, which had been 11 and 12 in the two preceding weeks, further rose to 16 last week, and included 10 in Glasgow, two in Dundee, and two in Aberdeen. The fatal cases of measles, which had been seven, eight, and 16 in the three preceding weeks, declined again last week to six, of which three were registered in Glasgow and two in Edinburgh. The deaths from diphtheria, which had been five and six in the two preceding weeks, declined again to three last week and all occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 125, 104, and 101 in the three preceding weeks, increased to 102 last week, and were 54 below the number in the corresponding period of last year. The causes of 13, or more than 2 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·7, 25·3, and 22·3 per 1000 in the three preceding weeks, rose again to 22·4 per 1000 during the week ending May 23rd. During the past four weeks the death-rate has averaged 23·9 per 1000, the rates during the same period being 15·6 in London and 16·4 in Edinburgh. The 163 deaths of persons belonging to Dublin registered during the week under notice were within one of the number in the preceding week and included 11 which were referred to the principal infectious diseases, against 15 in each of the two preceding weeks; of these four resulted from small-pox, two from "fever," two from diarrhœa, and one each from measles, scarlet fever, and whooping-cough, but not one from diphtheria. These 11 deaths were equal to an annual rate of 1·5 per 1000, the death-rates last week from the same diseases being 1·7 in London and 1·0 in Edinburgh. The fatal cases of small-pox, which had been four in each of the two preceding weeks, were again four last week. The mortality from both "fever" and diarrhœa was slightly in excess of that recorded in the preceding week, while the deaths from measles and whooping-cough showed a decline. The 163 deaths in Dublin last week included 27 of children under one year of age and 41 of persons aged 60 years and upwards; the deaths both among infants and elderly persons last week were slightly fewer than in the preceding week. Six inquest cases and seven deaths from violence were registered, and 59, or more than a third, of the deaths occurred in public institutions. The causes of seven, or more than 4 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Staff Surgeons: A. H. L. Cox to the *Pembroke* for the *Northumberland*. Surgeons: A. W. Iredell, W. K. D. Breton, F. C. Robinson, C. H. Dawe, C. E. C. Child, R. Thompson, W. A. Illingworth, M. T. Male, R. Kennedy, J. H. L. Page, J. J. H. Rooney, E. S. Wilkinson, W. E. Ormsby, E. A. G. Wilkinson, and A. F. Fleming to the *Duke of Wellington* for Haslar Hospital. Civil Practitioners: S. Copley to be Surgeon and Agent at Boyne and Clogher Head, and G. Byres at Belhelvie, N.B.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel G. D. Bourke to be Colonel, vice W. J. Fawcett, promoted (dated April 1st, 1903); Lieutenant-Colonel E. V. A. Phipps retires on retired pay (dated May 27th, 1903).

Surgeon-General J. A. Clery, C.B., Principal Medical Officer at Pretoria, has arrived home.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major R. S. Smith having resigned his appointment in the Volunteers ceases to be an officer in the Army Medical Reserve of Officers.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The Manchester Companies: Lieutenant W. M. Steinthal to be Captain. Dated May 27th, 1903.

VOLUNTEER INFANTRY BRIGADE BEARER COMPANY.

Devon: Lieutenant H. W. Webber to be Captain. Dated May 27th, 1903.

ROYAL ARMY MEDICAL CORPS (MILITIA).

Captain A. R. H. Oakley resigns his commission. Dated May 27th, 1903.

The promotion of Lieutenant H. E. Dalby to the rank of Captain, which was announced in the *London Gazette*, dated May 5th, 1903, bears date March 28th, 1903, and not as therein stated.

IMPERIAL YEOMANRY.

Gloucestershire (Royal Gloucestershire Hussars): Surgeon-Captain H. Bramwell to be Surgeon-Major. Dated May 20th, 1903. Lothians and Berwickshire: Surgeon-Major T. F. S. Caverhill to be Surgeon-Lieutenant-Colonel. Dated May 20th, 1903. Pembroke: Surgeon-Lieutenant-Colonel G. R. T. Phillips resigns his commission and is granted the honorary rank of Surgeon-Colonel, with permission to wear the uniform of the regiment on retirement. Dated May 20th, 1903. Worcestershire (the Queen's Own Worcestershire Hussars): Surgeon-Lieutenant J. H. Beilby to be Surgeon-Captain. Dated May 20th, 1903.

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 2nd Sussex: Surgeon-Captain E. Downes resigns his commission. Dated May 20th, 1903. 4th West Riding of Yorkshire: Surgeon-Lieutenant P. E. Barber to be Surgeon-Captain. Dated April 25th, 1903.

Royal Engineers (Volunteers): 2nd Cheshire (Railway: Surgeon-Lieutenant E. Gray to be Surgeon-Captain. Dated May 27th, 1903.

Rifle: The Queen's Rifle Volunteer Brigade the Royal Scots (Lothian Regiment): Captain J. H. A. Laing resigns his commission and is appointed Surgeon-Captain, with precedence next above Surgeon-Captain J. A. Clark (dated August 29th, 1894); Surgeon-Lieutenant S. Hillier to be Surgeon-Captain (dated May 20th, 1903). 3rd Volunteer Battalion the King's (Liverpool Regiment): Surgeon-Lieutenant J. P. Pendlebury resigns his commission. Dated May 27th, 1903. 3rd Volunteer Battalion the Lincolnshire Regiment: Surgeon-Lieutenant J. Bruce to be Surgeon-Captain. Dated April 25th, 1903.

INFECTED ARMY BLANKETS.

The report that a large quantity of soiled and infected army blankets had been brought from South Africa to this country and widely distributed and that an outbreak of enteric fever on board the reformatory ship *Cornwall* had been directly traceable to this cause was well calculated to give rise to the consternation with which the news was received. It certainly seems inconceivable that such an occurrence could have taken place, but the facts appear to leave no doubt on the subject. It calls for very searching investigation, for it is clear that there have been very reprehensible negligence and blundering somewhere Consequent upon the highly commendable action taken by the port sanitary officer of the corporation of the City of London in connexion with the outbreak on the training ship lying off Purfleet, the Government and sanitary authorities were promptly informed with a view to the necessary measures being taken The subject has excited great attention not unmixed with a natural feeling of indignation Both Mr Long and Mr Brodrick have made statements in Parliament in regard to it and have promised full inquiry In the face of what the War Minister said as to the existing regulations about infected bedding and materials, supplemented by the special orders issued to South Africa in regard to this matter—to say nothing of what is, or should be, common knowledge in this respect—there seems to have been an inexplicable amount of gross negligence and disregard of ordinary precautions for which somebody should be held responsible Who was it that ordered the sale of these blankets ?

Correspondence.

"Audi alteram partem."

ACUTE EPENDYMITIS

To the Editors of THE LANCET

SIRS —Having read the interesting paper by Dr J A. Coutts on Acute Ependymitis in an Infant in THE LANCET of April 25th, p 1163, it has occurred to me that brief notes of a case somewhat similar in character may be of value The case was briefly as follows A child, aged three years, was admitted into the Bristol Royal Infirmary under the care of Dr J E Shaw, with a history of having been attacked the same evening with severe vomiting On admission the child was cyanosed, the respirations were 70 the pulse was 172 to the minute and the temperature was 104° F On the following day there were twitchings of the right arm, internal strabismus of the right eye developed, and double optic neuritis was found to be present. The child died the same evening At the necropsy the brain externally appeared to be perfectly healthy and no trace of exudation could be seen over the vertex, at the base, in the Sylvian fissures, or elsewhere On cutting across the cerebral hemispheres however, the walls of the lateral ventricles were seen to be in the diffluent condition not uncommonly present in meningitis The only firm portion of the walls of these cavities, as is so commonly the case, was the basal ganglia In spite of this condition of the walls of the ventricles the choroid plexuses and velum interpositum to the naked eye presented *nothing abnormal* and *the ventricular fluid* was only slightly turbid Dr J O Symes took cultures from the fluid of the lateral ventricles and *found Friedlander's diplobacillus* Portions of the basal ganglia were taken for microscopic examination, but the sections were not cut by myself, and unfortunately the ependyma became detached and lost before the sections were made In spite of the softened character of the greater part of the walls of the lateral ventricles microscopical examination of the basal ganglia showed nothing especially noteworthy It should be added that the posterior half of the upper lobe of the right lung showed consolidation of typical lobar type The same bacillus was obtained from the consolidated lung as *from the fluid in the cerebral ventricles* *The course of* this case was very much more rapid than the case of Dr Coutts but resembled it in the sudden onset in which vomiting was a marked feature and in the presence of convergent strabismus

I am, Sirs, yours faithfully,

Clifton, May 18th 1903 THEODORE FISHER

SOUTH AFRICAN CIVIL SURGEONS' DINNER

To the Editors of THE LANCET

SIRS,—May we call attention through the columns of THE LANCET to the above dinner on June 5th at the Hotel Cecil at 7 30 P M ? Owing to the difficulty of obtaining correct addresses of many of the civil surgeons we have been unable to communicate with all those who have served in South Africa Over 800 cards of invitation have been sent out and some 50 returned as "Gone away," so we take this opportunity of endeavouring to catch the eyes of those who have *not* received *cards* Sir William Thomson, C B , will preside Guests may be invited and miniature medals and decorations will be worn

We are, Sirs, yours faithfully,

F E FREMANTLE, } Honorary Secretaries
C G WATSON, }

44 Welbeck street W May 25th 1903

THE TREATMENT OF CONICAL CORNEA

To the Editors of THE LANCET

SIRS,—May I be allowed to thank Sir Anderson Critchett for his letter which appears in THE LANCET of May 23rd, p 1477, in which he unreservedly admits the claim I made in my former letter on the above subject? I should also like to say as regards his method of "two distinct zones" that I shall certainly be disposed to give it a trial when opportunity arises in a suitable case I must add, however, that later experience has tended to show me that operation can be avoided in many cases by a suitable pair of glasses combined with general treatment

I am, Sirs, yours faithfully,

Liverpool, May 25th 1903 RICHARD WILLIAMS

ASEPTIC AND ANTISEPTIC SURGERY.

To the Editors of THE LANCET

SIRS,—In THE LANCET of March 21st, p 837, is a letter by Mr A. Webb Jones commenting on an address by Mr W Watson Cheyne on Aseptic and Antiseptic Surgery in which Mr Cheyne says that one trained solely in aseptic methods is less liable to adapt himself to his surroundings once he has to practise surgery far from the polished walls of a modern operating theatre My experience has been of a similar kind to that of Mr Jones I have been engaged in operative work in the West Indies for the past *eight years, and my results, especially in abdominal surgery*, have been very encouraging I am impressed that it is not inability in adapting oneself to the surroundings, but the blame attached to surroundings is due to the recklessness of the ordinary general practitioner in attempting surgery and instead of attributing the bad results to lack of operative skill and incorrectness in surgical diagnosis and surgical tecl [illegible] &c

I [illegible] I have obtained that the [illegible] ith the results of the operation Of course an operator always tries to obtain the best hygienic surroundings possible Two of my recent cases go to prove what I say about surroundings The first case was that of a woman, aged 65 years, the diagnosis being malignant disease of the cervix uteri The patient resides in a small house in a densely populated village and to improve matters a cooper's shop adjoins the yard of the house On March 5th, 1903, I removed the uterus, both of the ovaries, tubes, &c., and the upper part of the vagina by the abdominal route The patient has done well, the wound healing by first intention and the stitches were removed on the tenth day The second case was that of a man, aged 40 years, the subject of appendicitis, who resides in another densely populated village. I operated upon him on April 5th, 1903, at his own house—a small room 12 feet by eight feet The appendix *vermiform* was bent upon itself and very *adherent* , the tip of the appendix was alongside the cæcal origin of the appendix. This case did well ; all the stitches were removed on the seventh day the wound healing by first intention The patient is up and about

I have had several such cases and I feel the more convinced that it is the man and his methods that succeed in surgery and the surroundings should never be blamed All of my cases are prepared for operation as though they were in the most up to date equipped hospital My instruments are boiled in soda and carbolic solution for one hour The dressings, gauzes, aprons, towels &c., are sterilised in a Schimmelbusch *steriliser* under a steam pressure of ten pounds for one hour, [illegible]

no part in the surgical operation, provided the methods are perfect. The windows are all open during the operation and I have never had any sepsis that I could attribute to the surroundings. I see to the preparing of the patient as to the cleaning of the site for operation and the carbolic compress. I sterilise my own gut, instruments, dressing, &c., and last, but not least, I always dress my cases myself and check the temperature taken by the nurse, and I feel always quite convinced that should anything occur after I have sealed up an abdomen such as sepsis, it would have taken place in the most up-to-date glazed-tiled hospital ward.

I am, Sirs, yours faithfully,
FREDERICK DEANE, F.R C.S. Edin.

THE SURGEON AND THE CARPENTER.

To the Editors of THE LANCET.

SIRS,—I for one admire that surgeon who, according to Sir W. H. Bennett, "considers himself nothing much better than a good carpenter." For I understand him to signify, in slightly allegorical terms, that his chief concern is towards the attainment of perfect manual dexterity and a perfect knowledge of normal and pathological anatomy. He does not, as I interpret, aspire to proficiency in the understanding of the human organism as a whole, but rather, when he operates, is content to regard his task as a carpenter might, who cuts and planes and drives his nails and screws all with studied indifference to the feelings of surrounding structures, except perhaps—and even these are, I understand, not invariably exempt—when they happen to be gas-pipes or water-pipes or telephone wires. It is the success of the operation and not the general welfare of the patient's whole body that is paramount to him. And I, for my part, admire the surgeon who can thus concentrate his mind upon the part and faithfully shut out any disturbing considerations concerning the result to the whole.

But, Sirs, the whole—the coöperative body and spirit—must surely need an advocate, and some proved and disinterested advocate too, skilled in the consideration of the dangers and drawbacks as well as of the necessities and advisability of recourse to human carpentry. If the surgeon is to be "nothing much better than a good carpenter," surely, at any rate where main timbers may by any possibility be involved, some architect or overseer is needful, someone specially skilled in assessing the damages and estimating the practicability and expenses of the repairs. For how often, in his anxiety to make his mark, is the present-day surgeon led to interfere with parts that do not in reality seriously inconvenience the whole? How often are parts rudely interfered with when they are no more than temporarily deranged and would spontaneously return to their normal conditions if only granted a little grace? How often when the arms of death have already unerringly embraced the whole will the surgeon, with worse than blind enthusiasm, embark in extensive predoomed endeavours to rescue the part? The temper of the surgeon of the day appears to be towards challenging the right of physicians to criticise the results of surgery and indignantly resenting any interference at their hands or from anyone—and I fancy Sir W. H. Bennett, surgeon though he be, will not in all quarters escape condemnation for what he has ventured to tell us—who pleads for rational moderation in the matter of operations.

So it is that we come to read—and this has become a favourite topic with the lay press—of all the enormous increase of operative procedures. Sir W. H. Bennett's experience, from which he so admirably quotes, has probably been largely gleaned in the metropolis. Had he the benefit of having watched the careers of operating general practitioners in the provinces I have no doubt that his remarks would have been even more severe than they were. There are not a few surgeons among us who appear never to emerge from Sir W. H. Bennett's "first stage," but who as an alternative for the later ones become very proficient in the art of extricating themselves from difficult positions as they arise. And at present they undoubtedly have the public on their side and in a mood which condones failure with extraordinary readiness.

But it is my serious belief that Sir W. H. Bennett will be proved by time to be a true prophet when he says that "ere many decades have passed away the operating surgeon will be a far less imposing figure than he now is," and I venture in addition this warning, that popular estimation is a treacherous helm and one that is apt to cause its ship to veer widely. And as the public to-day undoubtedly suffers from an excessive antipathy to venesection, so the day may come when we shall see the present excess of all-round surgical interference replaced by an undue and indiscriminate distrust of it, bred of retaliation in the minds of a disabused laity.

I am, Sirs, yours faithfully,
EDGAR TREVITHICK, M.D. Cantab.
Cheltenham, May 26th, 1903.

ASPECTS OF LIFE ASSURANCE.

To the Editors of THE LANCET.

SIRS,—As one much interested in life assurance I venture to answer the letter of "N. M. R" which appeared in THE LANCET of May 23rd, p. 1478 In the first place I believe that I am correct in stating that it is the custom of all offices in cases of suicide to pay if the policy has been assigned; secondly, many offices have a clause in the policy which makes it indisputable after the payment of a certain number of premiums, usually five; and lastly I doubt whether any office would dispute payment in the event of death by suicide, especially if there were any medical evidence available to show that the deceased was mentally in a condition of unstable equilibrium at the time that the act was committed.

As to whether it is desirable that payment should be made in the event of suicide, assigned policies alone excepted, is another question It may be argued with much force that the fear of leaving his family unprovided for may have a deterrent effect on the would-be suicide; remove this fear by the knowledge that his assurance money will be available for the support of his family and you do away with the last check on his rash deed. Definite information as to the custom of the various offices in respect to claims due to suicide is much to be desired.

I am, Sirs, yours faithfully,
Wimpole-street, May 25th, 1903 F. DE HAVILLAND HALL

To the Editors of THE LANCET.

SIRS,—The cases of suicide referred to by your correspondent "N. M. R." in THE LANCET of May 23rd, p. 1478, would be fully secured by the conditions of insurance which hold at the office with which I am connected and I believe at most of the first-class offices—viz, (1) that after the completion of a full year's insurance death from suicide is accepted as a claim as from any other cause; and (2) the cases in which a policy is taken as security in the course of business death by suicide at any time does not affect the validity of insurance.

I am, Sirs, yours faithfully,
May 22nd, 1903. C. M. G.

A QUERY IN EMBRYOLOGY.

To the Editors of THE LANCET.

SIRS,—I was particularly interested in "Oxon's" letter in THE LANCET of May 16th as I witnessed an almost identical experience in the canine race which may be worth recording.

The facts relate to kangaroo hounds, a breed of dogs well known in Australia; the puppies exist, as a rule, more on account of the deeds of their parents than because of any purity of descent, consequently the characteristics of the hounds vary in different districts, but generally they partake more or less of those of a greyhound, and this applies particularly to the two hounds of which I write. I have no record of dates and the occurrence took place at least seven years ago, but my memory is quite clear as to the main facts. On a certain Friday I took a white and blue bitch to be lined by a brindled dog and they were shut up together from the Friday night till the following Monday afternoon, the owner of the dog being quite clear that service was duly performed more than once and for the first time on the Friday evening. I removed the bitch on the Monday and on the way home met a friend who was followed in the distance by a sheep dog; my bitch, on ahead, met the sheep dog and though I galloped up was too late, to prevent connexion. In due time (though I did not note the exact number of days) a batch of seven puppies arrived and they were a very disappointing lot. However, my men insisted that mixed litters did occur (? do they), and we picked out the three most likely-looking pups, two of which lived to maturity and proved to be undoubtedly sheep dog crosses; they had semi-rough coats with a short feather on the tail and barked in the chase. I know that the brindled kangaroo dog was potent because he was not only the father of many dogs in the district but two of my bitches had pups to him the following year. The kangaroo dog was an oldish dog at the time, probably six or seven years old; the sheep dog, on the other hand, was between eighteen months and two years old. The bitch was about three years old. The questions arising are :—1. How long will spermatozoa live in utero? 2 Were the ova fertilised before connexion with the sheep dog? 3 Are spermatozoa from an oldish or debilitated animal so much less active than those from a younger one that they take several days to fertilise an ovum? 4. Can the male elements be replaced in a fertilised ovum several days after fertilisation? I do not believe in maternal impression and it certainly would not account for the barking in chase.

I am, Sirs, yours faithfully,

B So.

May 19th, 1903.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Unhealthy Military Stations.—The Plague Epidemic.—The Excessive Heat.—The Continued Famine.—The Improvement Scheme for Calcutta

FROM time to time various military stations in India have been reported upon as exceptionally unhealthy and attention has been drawn to the great loss of service as well as of lives entailed thereby. There is less excuse in these days of railways and rapid transit for their maintenance and so-called military considerations have not now the same weight that they formerly had. I would draw further notice to the excessive sickness at Fort Dufferin from malaria, to the high mortality from dysentery in Barrackpore, and to the high rates for the constantly sick in Delhi, Ferozepore, Mean Meer, Nasirabad, Jhansi, Jubbulpore, and Pallavaram. The chief cause of sickness in nearly all these places is malaria, but the death-rate for all causes in some of them is enormous. There is a rumour that Barrackpore is to be given up as a military station and the troops transferred to Dum-Dum.

The plague returns issued from Simla show a reduction in the number of deaths as compared with the previous week, but the total is still very high, being 28,146. The figures returned by the various localities are as follows Punjab, 17,068 deaths; United Provinces, 3139; Bombay Presidency, 3357; Bengal, 1863; Bombay city, 1146; Karachi, 197; Madras Presidency, 42; Calcutta, 434; Central Provinces, 221; and Hyderabad State, 423. The above figures show that the disease is raging with great virulence in Karachi and in Bombay city, but later returns show a marked improvement in Calcutta

During the past fortnight the heat in many parts of India has been intense. In Calcutta the shade thermometer recorded 109° F., in Jessore 108°, in Midnapore 111°, and in Berhampore 114°. There are still people who believe in the deterrent effect of a high atmospheric temperature upon the spread of plague notwithstanding that the disease has developed in Karachi, the Punjab, and Calcutta almost every year with the hot dry weather of the months of March, April, and May

Famine is still existent in India. In the Central Provinces the numbers under relief are increasing and the total is now 62,051, of whom 45,559 are on relief works.

The great improvement scheme for Calcutta is threatened with comparative uselessness, as beyond the making of new roads there is no provision for other improvements. All available means are likely to be swallowed up on this limited programme and the bustees and by-lanes and gullies, surface drainage, and privies will be left to be dealt with in the ordinary course. The great cry now is that no provision is being made for the large population displaced by the activities of the plague department. There is the same wail in Bombay. Thousands have been rendered homeless and the result has been that the neighbouring quarters to those demolished have become still more overcrowded. It may be said to be an aphorism of modern sanitation as applied to great cities that construction must go hand-in-hand with destruction. An attempt has been made to carry this out in Bombay but in a degree wholly incommensurate with the population displaced In Calcutta nothing has been done at all.

May 9th.

THE SECOND INTERNATIONAL CONGRESS OF THE MEDICAL PRESS.

(FROM OUR SPECIAL CORRESPONDENT.)

THE SECOND DAY.

Madrid, May 10th.

ON the Wednesday (April 22nd) morning it was thought that we should reach the real business that had brought us together—namely, the vote upon, and the definite acceptance of, the statutes of the International Association of the Medical Press A strong desire was, however, expressed to obtain some manifestation of opinion in regard to the questions discussed the previous day and this in spite of the fact that the Congress was not in a position to vote, for it had not as yet decided on the method of voting. But it was nevertheless maintained that it would be time enough to discuss the constitution of the association in the afternoon while the Congress might express its opinion in the morning on some of the general questions. Such expression of opinion would not have any binding effect, it would not be a "legislative" act but merely a manifestation of opinion of a platonic description. This seemed to be somewhat illogical, for if the Congress had the power to vote a constitution, which is certainly a serious and anything but a platonic matter, its other resolutions should have equal force. But then the constitution by establishing the vote by nationalities would certainly render the vote of the congress far more representative than by the mere raising of hands Therefore the general discussion was resumed and Dr. BLONDEL proposed that the Congress should not consider as medical journals publications that only reported the meetings of societies. Dr. VIDAL agreed, saying that in the absence of some such rule a phonograph would suffice and the owner of the phonograph would call himself a journalist

Dr. ASCOLI (Italy), like Dr. POSNER (Berlin), thought that such reports of meetings of societies were useful but to constitute a journal other matter should be published. Even if medical men grouped themselves together so as to produce a journal collectively, and if this, in the course of evolution, tended to benefit science, they would not complain even though it were qualified as medical socialism

Dr. FRANK POPE (Leicester) asked for a more distinct definition, otherwise such a resolution might be taken to exclude the *British Medical Journal*. This question caused some amusement and elicited complimentary remarks acknowledging that the *British Medical Journal* was a journal and contained all that a journal was expected to contain, apart from being the organ of the British Medical Association Dr. Pope then urged that each section should be left to decide what might legitimately be considered as a journal.

Dr. SUAREZ DE MENDOZA (Paris) inquired what was to be done with the bulletin of the French Academy of Medicine, but in spite of this question a motion to the effect that periodicals which only published the record of the proceedings of societies should not be considered as journals was unanimously approved

The Congress now discussed the question of gratuitous papers Some French firms publish, it appears, what purport to be medical journals in the Spanish language and send these papers gratuitously to Spanish medical men. Of course, the object is to promote the sale in Spain of French proprietary drugs and remedies.

Dr. POSNER said that this was a serious matter, for undoubtedly some of these papers were very well written and the writers were well paid for their articles. In Germany these papers went a step further. They assumed the cloak of philanthropy and collected and distributed funds for the relief of the widows and children of medical men. These papers circulated all over Germany. There was one which, while calling itself a medical journal, devoted most of its pages to questions concerning dental instruments.

Dr. MENDOZA said that gratuitous papers could only be issued for the sake of selling drugs or instruments, therefore they were not journals but *trade circulars* Nevertheless, they contained good matter—notably the publication issued by Messrs. Faillière of Paris.

Dr. ULECIA Y CARDONA, while declaring that the evil did not exist in Spain, admitted that it was likely to spread. They might carry condemnatory resolutions but as soon as their opinions were known the dealers and manufacturers would so disguise themselves as to escape censure. They could secure the services of medical men and pay them well. Could they boycott medical men who accepted such payment and were there not many medical men who would set such ostracism at defiance?

Dr. Pope remarked that this sort of thing also existed in England but that the greater number of such publications were sent across the Atlantic or to Germany. There were papers that were gratuitous or nearly so, but the *bonâ-fide* nature of a journal could only be judged on the spot. The national associations must exclude unworthy prints and the action of the national associations must be supported and sustained by the International Association.

Dr. Totimo divided the papers into two groups, those published to diffuse science and those which only utilised science as a means of selling goods. The first category alone should be admitted.

Here Mr. Adolphe Smith intervened in the discussion to remind the Congress that at the Monaco Conference, after careful consideration, it was decided that the association was to be representative exclusively of the scientific and literary side of journalism. The commercial side was absolutely excluded. This rule had been strictly observed by the Association of the British Medical Press. Its members were admitted as editors or contributors to medical journals and not as proprietors or business managers of those papers. The most effective means of dealing with the evils mentioned was to maintain a high standard of journalism and if this was properly done the sham journals would soon disappear.

Dr. Totedo agreed and said that all papers were dual concerns. There were the scientific side and the business side, but the association was created solely for the scientific side. He did not think that medical men should take in papers published by manufacturers and such papers should not be admitted in the society.

Dr. Calatraveno urged that no industrial paper should be admitted, that no exchange with them should be made, and that medical men who wrote for them should not be considered as fellow professionals.

Dr. Mendoza rose to modify the very condemnatory tone that was being adopted and recalled a Spanish proverb. If a poor man took too much alcohol everyone said he was drunk, but if the man was rich then it was said that he was only a little cheerful. Where was the line to be drawn? Nearly all the papers published advertisements if they could get them. A member of the French Medical Press Association wrote for the paper published by Messrs. Faillière and they were very good articles. Should they not recognise good scientific material wherever they found it without looking too closely into the sources whence the money was derived to pay for its publication?

At this stage the discussion dropped and the Congress adjourned for lunch.

On meeting again the Congress at last grappled with the real business, and as now we should have to vote, and to vote seriously, we must begin at the end by taking Article XII. first, as this defined the method of voting. Dr. Cortezo, who occupied the chair, called upon Mr. Adolphe Smith to explain. There was no difficulty in demonstrating that the vote must be by nationality and also that some difference must be made between nationalities. But it was proposed to add a definition of small nationalities to the Monaco text, which now ran thus: "At the general assemblies [congresses] the votes will be by nationality."

> So as to give a voice to the minority within each nationality five votes shall be given to each large nationality and three votes to the others. For the present those shall be considered as large nationalities whose populations exceed 10,000,000.

What was not so clearly understood was the manner of recording the vote. Mr. Adolphe Smith endeavoured to explain that it was merely a matter of simple arithmetic. Every nationality must appoint its teller and the vote must be put separately to each nationality, the teller apportioning the vote of his nation according to the division of opinion that might occur; thus, if a small nationality had 12 delegates present and eight voted for and four against a motion, the three votes of that nationality would be recorded as two for and one against. If a delegation could not be divided exactly by its three or five votes the nearest possible approximation must be given. After a few questions had been put and answered the motion as given above was carried unanimously, and thus this really important innovation in the manner of organising international congresses which had been approved at the Monaco Conference was now definitely confirmed and sanctioned by the Madrid Congress. The other rules relating to the general assemblies of congresses of the International Association of the Medical Press were carried with hardly any alteration whatsoever.

Article I., on which it had been anticipated that an amendment would be moved, was now taken in hand. It was explained that in the French national association only journals were represented, that in Germany one journal sent several representatives, and that in Spain journals of kindred professions were admitted. As customs differed so widely it was necessary to leave each country to decide for itself as to who should be admitted, but the question was now raised. The amendment proposed by Dr. Mendoza was that the individual should have the right to appeal to the Congress as a whole against the decision of his own nationality. This demand was based on the belief that in France persons had been condemned without being heard or possessing any sort of right of appeal.

Dr. Dejace (Belgium) maintained that the Congress could not do better than, or as well as, the nationality concerned, where alone the necessary information could be obtained.

Dr. Blondel followed, giving chapter and verse concerning the incident alluded to as occurring in France. He showed that there had been an investigation and that there was a right of appeal and that full reparation had been made for whatever error had been committed. In the face of this announcement Dr. Mendoza withdrew his amendment and Article I. of the statutes was carried unanimously. The International Association of the Medical Press, therefore, is to consist of journals or journalists approved of, or elected by, their respective national associations of the medical press. Article II., that copyright is to be respected and an international subscription paid, was carried, but Paragraph 1 of Article III. gave rise to a very lengthy discussion. The article was carried unanimously when the disputed sentence was removed so as to be put as a separate article and question. The question was in regard to clinical or university lectures, whether the professor could retain the copyright of the same. In Spain the law was in favour of the professor, but it was against him in France.

Dr. Posner said that there was an abuse. In Austria papers were published and kept alive by students who went and took notes when some celebrity delivered a lecture and then published these notes in such a manner that it seemed as if the professor in question had written a special article for the paper. The professor, as a matter of fact, knew nothing about it, and such trading on a well-known name should not be countenanced.

Dr. Pope said that lectures delivered in great faculties were taken down in shorthand and published. It was the business of a journal to do this well and promptly, as a matter of reporting.

Dr. Dejace urged that the professors were paid by the Government and what they said was said for the public. When necessary the journalist paid to enter and he had a right to take notes and to do what he chose with what he heard. The association which they were founding was an association of journals and journalists, not of professors and lecturers.

Dr. Posner objected that in jurisprudence the property of the lecturer was respected.

Dr. Cortezo, from the chair, said that they had voted against such proprietary rights at Monaco. They were here creating frontiers and the press would find it very difficult to feed itself. Medicine had its humanitarian side and all that tended to spread useful knowledge should be encouraged.

After some further remarks from one or two delegates the matter was put to the vote and there now occurred a good opportunity of testing the new system of voting, because it so happened that one nation, France, was very divided in its opinions on the question. The rule proposed was:

> That lectures cannot be published without the sanction of the professors.

The vote was as follows: Germany, 5 for; Belgium, 3 against. Now came the turn of France and the French vote was 3 for and 2 against. Then followed Spain, 5 against; England, with only two delegates present, voted 5 against—thus the two British votes were as influential as that of the 50 or so Spanish delegates who were attending the Congress. Thus also neither Great Britain nor any other nation was placed at a disadvantage by the fact that, meeting in Madrid, there were far more Spanish delegates present than delegates from any other country. Italy voted 5 for, Argentina and Norway 3 each for, and Venezuela 3 against. The resolution was thus carried by 19 votes against 18. The full details of this division deserve to be recorded, so that the system may be understood and a precedent created. All the other rules, with but some slight verbal alterations, were now adopted. Nevertheless, it was thought necessary to meet again on the following morning. It was the committee rather than the Congress that had still some important work to do. Therefore on Thursday we were back once more at the Central University and the international committee met in a private room. The question arose as to whether the system of the nationality vote was to apply to the committee meetings. In answer Mr. Adolphe Smith remarked that the committee was an executive and not a legislative body. It had to carry out decisions adopted in as practical a manner as possible and was governed exclusively by considerations of expediency, the questions of principle having been established by the constituency, that is by the Congress. Therefore, votes in committee should be by show of hands. The first matter to decide was the election of the officers. After some discussion but by a huge majority Dr. Cortezo was elected as president. We had all acquired considerable experience of Dr. Cortezo's tact and unfailing courtesy, as he had presided on behalf of Spain at all the sittings of the Congress. Dr. Posner, Dr. Dawson Williams, and Dr. Ascoli were elected as the three vice-presidents. Therefore there is a Spanish president with German, English, and Italian vice-presidents. France, in the person of Dr. Blondel, is represented in the post of general secretary, and Belgium retains Dr. Pechère as assistant secretary and treasurer. It was then decided that at least the International Committee should meet at Brussels immediately before the International Congress of Hygiene which will assemble in that town on Sept. 3rd this year.

We now proceeded to the grand hall, the *paraninfo*, of the University, and there Dr. BLONDEL read a paper on the Establishment of an International Information Bureau. No paper, he maintained, could have correspondents in all parts of the world, and just as the political daily papers had to subscribe to press agencies such as Reuter's so might a similar agency be organised for the benefit—the exclusive benefit—of medical journals belonging to the International Associational of the Medical Press and this might prove an inducement to papers to join that association. He thought that a central bureau should be created under the patronage of the association to which all the papers would send summaries of their more important publications which would be distributed by means of the agency.

This explanation led to the asking of a few questions and the expressing of some doubts, and then Dr. ELÉZIA, who had been one of the delegates at the Monaco conference, rose and proposed that the association now definitely constituted should send a telegram to the Prince of Monaco thanking him once more for his hospitality and help during the earlier stages of the endeavour at organisation.

This was carried unanimously.

The names of the officers of the association were now read out amid great applause.

Dr. BLONDEL said a few words to thank the Spanish committee and its general secretary, Dr. Larra, and

Dr. CORTEZO gracefully alluded to his sorrow that the moment of parting had arrived. He did not know how to express his gratitude for the honour that had been conferred on him; he accepted the presidency, not as a personal matter, but in the name of Spain and as an honour conferred on his country.

The Congress having completed its task rose and was dissolved, the members hurrying to their respective quarters to prepare for the inaugural ceremony of the other Congress, the Fourteenth International Congress of Medicine, which was to be held that same afternoon.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Hospital Saturday Fund.

NINE years ago the managers of this Fund were able to open a convalescent home for women at Llandudno in part of an old house called Marle Hall. This home when opened was very inferior in size to the neighbouring house called Tyn-y-Coed which was intended for male occupants. Marle Hall was originally a monastery which was burnt out and restored in the sixteenth century and again destroyed by fire in the eighteenth century. It remained a ruin for 100 years when one wing was rebuilt and occupied for some time by members of a well-known Staffordshire family. Nine years ago the Hospital Saturday Fund acquired this wing for the purposes above mentioned. The accommodation only permitted of the keeping up of 22 beds, a number soon found to be altogether inadequate; consequently a second house, also for the use of women, called Yr Erw, was rented, but even this did not meet the necessities of the case. It was therefore decided to purchase and to restore Marle Hall and this has now been done at a total expense of £16,000. The result is said to be architecturally satisfactory and the building will accommodate 85 convalescent women. Of the sum of money expended £5000 were to hand from accumulations of the fund and £1500 have since been given. The total number of women who have passed through the two homes mentioned above since they were opened has been 6620. The number of men who have passed through Tyn-y-Coed has been 8262, whilst 1193 children have been accommodated at Bryn Marle and at the Red House, Great Barr. Thus 16,075 convalescents have been occupants of the various homes maintained by the Fund since this part of the work was undertaken. At the opening of Marle Hall, which took place a few days ago, Alderman Cook, the chairman of the Fund, presided, and the Lord Mayor and Lady Mayoress of Birmingham were amongst those present, the latter performing the ceremony of opening the home. The committee anticipates that it will take several years to pay off the debt upon the buildings unless some large donations are made for that purpose or the subscriptions of the members of the Fund are increased for a time. The maintenance of the enlarged homes will also, of course, be an increased burden upon the Fund and it is calculated that at least £20,000 per annum must be raised in order to carry on all the work which is now being done

Walsall Dispensary.

A provident dispensary has now been formed in Walsall in order to take the place of the clubs which have recently been disbanded and the rules under which it will work have been made public. This dispensary is intended to provide medical attendance and medicine for persons unable to pay ordinary medical fees. It is to include, in the first instance, all the medical men now resident in the district who can be persuaded to join it. As new-comers take up their residence with the intention of practising they are to be invited to join and are to be furnished with a copy of the rules by the secretary. The medical officers are to be of two kinds: active, who treat the patients of the dispensary; and honorary, who do not. Both classes will be entitled to attend the meetings of the dispensary and if elected to hold any office in it. Persons wishing to join as patients are to apply in the first instance to the secretary at the office and he is to provide them with a card to take to such medical officer as they may select. After the necessary expenses of the dispensary have been paid each quarter the remainder of the money is to be divided amongst the active medical officers in proportion to the number of patients on their respective lists. The expenses are to be apportioned in the same manner and the committee is to decide as to the eligibility for membership and the continuance of the same of patients. In the case of a patient apparently too well off to belong to the dispensary, the committee, on having the matter brought to its notice, is to inquire into it and to decide what course is to be adopted. When a medical man joins the dispensary he will be required to sign a declaration to the effect (1) that he will not take any contract patients at a lower rate than that paid to the dispensary, except members of existing friendly societies; (2) that he will not advertise for patients directly or indirectly; (3) that he will obey the rules of the dispensary and do nothing contrary to its welfare; and (4) that he will not meet professionally or in consultation non-conforming medical men. Power is given to the committee to call upon any medical officer who does not conform to the engagement which he has entered upon [illegible] in the event of his refusing to expel him. In [illegible] staff his [illegible]

Club Statistics.

A very interesting and valuable report on club statistics for the year 1902 has been prepared by the executive committee of the Birmingham and District General Medical

Practitioners' Union and published in its organ, the *Midland Medical Journal.* The statistics which have been tabulated relate to 34 clubs and the collected figures are sufficient to show the average rate of payment by local clubs for sick attendance. In the first place, the committee endeavoured to ascertain what was the average rate charged in private practice by general practitioners in the district for medical attendance on the working-classes who chiefly form the clubs which were the subject of inquiry. It appears that the average fees charged were 2*s.* 6*d.* for a visit, with medicine included, if necessary, and 1*s.* 6*d.* for a consultation with or without medicine, while "repeat" medicines were charged at a like price. It was then desired to ascertain how nearly the payments made by the sick clubs approximated to this standard, and after various methods of arriving at this conclusion had been tried it was finally decided to calculate how much the receipts would have been had the club patients been private patients. Taking all figures sent in it was found that in 1902, in 34 clubs there were 3063 visits and 13,042 consultations and medicine, remunerated by a sum of £786 19*s.* 7*d.*, whereas the sum received should have been £1361 0*s.* 6*d.*, a percentage of 57. Some of the clubs, however, consist mainly of old men and seem to be retained by their medical officers out of charity. When these are excluded from the calculation it is found that amongst the selected clubs there were 2108 visits and 9401 consultations, and that the remuneration was £627 10*s.* 9*d.* The remuneration on the lines indicated above should have been £968 11*s.* 6*d.*, so that the medical officers should have received half as much again as they actually did receive. On the sickness rate of 1902, which was rather lower than the average, a slight margin in favour of the medical man would have been left had each member paid 6*s.* per annum or 1½*d.* per week. Summing up the matter it may be said that the average rate paid per head of all the clubs of which information was to hand is very nearly 3*s.* 4*d.* on upwards of 3400 male adults and the average remuneration is 65 per cent. of the amount calculated above to be reasonable for a year which had less than the average sickness. It is pointed out that the figures only apply to a large city like Birmingham where the hospital facilities are great and where many of the most serious medical and surgical cases are sent, as a routine practice, to receive gratuitous treatment at these institutions. The multiplicity of these, while injuring the practitioner in his private practice, undoubtedly relieves the man in club practice of much onerous work, so that the rate of pay which would be equitable in a large city is by no means so great as it should be in small towns and in country practices.

May 26th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Small-pox in Liverpool: the Outbreak steadily declining.

DR. E. W. HOPE, the medical officer of health, made the satisfactory statement at the meeting of the health committee on May 21st that the epidemic of small-pox in Liverpool was steadily declining, but that he had no intention of relaxing any of the precautions hitherto adopted and especially that of vaccination and revaccination. It would be interesting to consider what had been the incidence of the disease on young children under five years of age. From the returns it appeared that about 7 per cent. of the children in Liverpool had escaped vaccination during the last six years, but he would take a liberal estimate and say 10 per cent., leaving 90 per cent. vaccinated. If the incidence of the disease were the same on the vaccinated and the unvaccinated, as the anti-vaccinationists insisted, the expectation would be that 90 per cent. of the cases among these young children would be among the vaccinated and 10 per cent. among the unvaccinated. The statistics, however, for the last six months showed that 71 children in Liverpool below the age of five years were attacked with small-pox and of these 66 were unvaccinated, while the remaining five had been vaccinated very imperfectly. These facts were very striking, but the most important point was that in the case of each of the vaccinated children the illness was very mild and each child soon recovered. In each of the 66 unvaccinated cases, however, the illness was very severe and 30 per cent. of the children died. During the last five years the rate of mortality from small-pox among the previously vaccinated was 2 per cent. of all ages, while among those not vaccinated it was 37 per cent. Within the last 18 months an enormous number of people in Liverpool, over 80,000, had been revaccinated, and from among them not a single case of small-pox had been admitted to hospital. Though the disease was now declining very fast there might be fresh importations and it would not be surprising if the decline were interrupted; therefore, precautions must be continued and revaccination should be performed wherever necessary. The weekly statistics showed that during the past week there had been six deaths from small-pox; 37 cases were reported, against 63 the week before, while there were 253 cases in hospital. The following record will show the incidence of the disease during the last three months: During the week ending March 7th, 88 cases were reported; March 14th, 84; March 21st, 85; March 28th, 67; April 4th, 62; April 11th, 66; April 18th, 94; April 25th, 69; May 2nd, 69; May 9th, 62; May 16th, 63; and May 23rd, 37 cases. The number of cases in hospital on March 19th was 335, as compared with 253 last week. These figures show that the health authorities of Liverpool are dealing with the epidemic as speedily as they possibly can. It is very easy for people outside to say that there is a greater spread of small-pox at the present time than a few months ago, but such statements are looked upon with surprise and amusement by the medical profession of Liverpool, who have the fullest confidence in Dr. Hope and his assistants. Moreover, Dr. Hope has managed to cope with the disease without the smallest friction with his medical *confrères* who at all times are only too ready to afford him all the assistance in their power in the matter of notification and in advising patients to go to hospital. It is generally admitted that no greater vigilance could be exercised than by the health department of the city.

Reported Escape of Small-pox Patients from Hospital.

The town clerk of Liverpool has informed the President of the Local Government Board that he caused inquiries to be made as to the statement that five patients had escaped from the Liverpool Small-pox Hospital. He found that there was no foundation for the report that five patients had escaped. One patient managed to get out of the hospital and reached a farmhouse in the precincts of the hospital grounds, but was promptly taken back to hospital.

Liverpool University.

Among the unopposed measures which came before the Earl of Morley, the chairman of committees in the House of Lords, on May 26th was the Liverpool University Bill The object of the Bill is to separate the University College, Liverpool, from the Victoria University and to establish a Liverpool University, transferring all the property and liabilities of the College to the new university. Principal Dale of University College proved the preamble and the charter was also produced. The Earl of Morley having examined the clauses the Bill was passed and ordered to be reported for a third reading.

Liverpool School of Tropical Medicine: the Tsetse Fly Experiments in West Africa.

Dr. J. E. Dutton and Dr. Todd of the Senegambia expedition in connexion with the Liverpool School of Tropical Medicine have recently made a short visit to Bathurst, preparatory to a visit to Senegal. They have been conducting a considerable number of experiments in the colony with the tsetse fly on various animals, the results of which they are sending to Liverpool for further investigation at the Johnston Laboratory at University College.

Generous Gifts to Liverpool Hospitals.

The treasurer of the Stanley Hospital has received an anonymous gift of £1050 towards the cost of erection of the new operating theatre. Mr. Heath Harrison has also sent a donation of £250 to the funds of the David Lewis Northern Hospital. The gift comes at an opportune time, as the committee has recently had to realise securities to the amount of £500 in order to meet current expenditure.

Munificent Donation to the Crewe Cottage Memorial Hospital.

Mr. F. W. Webb, the retiring chief mechanical engineer of the London and North-Western Railway Company, has given the munificent sum of £5000 towards the endowment fund of the Crewe Cottage Memorial Hospital. The hospital owes its inception to Mr. Webb who, in conjunction with Mr.

Henry Yates Thompson of Liverpool, subscribed a large amount which made the erection of the hospital possible.

May 26th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Typhus Fever in Merthyr.

THE story which Mr. D. J. Thomas, the medical officer of health of Merthyr, has to tell in his annual report of an outbreak of typhus fever which occurred in Dowlais during 1902 is not at all pleasant reading. The last occasion on which the disease appeared in the town was in 1894 and in previous years there had been outbreaks. In 1902 there were 22 cases of which eight terminated fatally. The source of infection was in many instances defined but not in all. The insanitary conditions of all the initial cases were well established. Poverty, filth, and overcrowding were present and attention had been previously drawn to the insanitary conditions of some of the houses in question. One of the affected houses was one of a row situated on the hillside with a backyard from three to five feet wide terminating in a retaining wall 20 feet high, an arrangement which favours a stagnation of the air inside the house. There were a kitchen and a scullery on the ground floor and two bedrooms above; the capacity of the two bedrooms was 1200 cubic feet and these were occupied at the time of the outbreak by husband, wife, six children, and four lodgers. Some of the men worked at night so that the beds were in constant occupation. The one remedy for such overcrowding as this, as Mr. Thomas points out, is in the establishment of properly regulated common lodging-houses. In a district of the character of Dowlais there ought not to be any difficulty in making a lodging-house self-supporting even if erected by the sanitary authority.

Bristol Port Sanitary Authority.

In their annual report upon the Bristol port sanitary district Dr. D. S. Davies and Mr. J. C. Heaven again draw attention to the urgency of requiring shipowners to rid their ships of rats. They point out that while definite precautions are universally enforced against non-living infection-carrying material such as clothes and bedding, living infection-carrying material endowed with locomotion and of [illegible] unrestricted importation. The [illegible] his report are of such general application that they may profitably be quoted: "It would result in a saving not only to the health or lives of the crew but also to the pockets of the merchants if shipowners were compelled to take simple measures of precaution, for nothing can be more wastefully expensive than an actual outbreak of plague and 'prevention in advance,' though less showy, is far more desirable than 'stamping out,' which involves the permitted introduction of disease. Since 1901 there has been a curious lull in alarms of ship-brought plague to the United Kingdom which has not had an altogether good effect, for in the absence of actual and pressing danger it is impossible to maintain the expenditure for a properly vigilant outlook and anticipatory precautions are the last matters upon which the ratepayer is willing to be liberal, so inured by long habit has he become to the belated process of 'stamping out' at great cost outbreaks which might oftentimes at much smaller outlay have been prevented."

Bristol Workhouse Infirmary.

The controversy between the Bristol board of guardians and the Local Government Board with regard to the provision of more suitable infirmary accommodation has reached a further stage. The Local Government Board has been insistent as to the urgent nece [illegible] of the existing wooden buildi [illegible] and for erecting a permanent [illegible] board of guardians described when asking for sanction to acquire it as "eminently suitable as a site for the proposed infirmary." The Bristol board now proposes to use the Eastville workhouse almost exclusively for the able-bodied and for the aged inmates who are in good health and to treat the sick and infirm at the Stapleton workhouse, adjoining which it is proposed to erect a new building to accommodate 250 patients and a separate block to be under independent management for 500 imbeciles. Upon the receipt by the Local Government Board of these proposals two of the Board's inspectors, Mr. Andrew Fuller and Mr. E. B. Wethered, together with the Board's architect, Mr. Kitchen, reported in detail upon the scheme which they do not consider to be at all satisfactory, both on account of the difficulty entailed in adapting old buildings to modern requirements and because there would be no adequate space for future extensions.

Stratton and Bude Water-supply.

On May 21st General Sir Redvers Buller formally opened the new waterworks which have been erected by the urban district council of Stratton and Bude, Cornwall. The water is collected in a reservoir which covers 70 acres, which has a capacity of about 150,000,000 gallons, and which is situated at Bradworthy about 10 miles from Bude. The water is carried along the Bude Canal, which the council has purchased for £8000, and the filtering and other arrangements are most efficiently carried out. The cost of the undertaking has been £23,000. The urban council believes that the thoroughly satisfactory water-supply now provided will assist the town in taking its proper place as a seaside and health resort

May 26th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Ulster Branch of the British Medical Association.

AT the spring meeting of the Ulster Branch of the British Medical Association held in the Medical Institute, Belfast, on May 13th, the President (Professor T. Sinclair) brought forward a motion expressing the sincere regret of the members at the death of their treasurer, Dr. George Gray, J P., of Newcastle, co. Down. This was seconded by Dr. H. O'Neill, J P., and passed. Mr. C. K. Darnell read notes of a case of Penetrating Wound of the Abdomen by the shaft of a car and showed the patient. Dr. John Campbell read a short paper on Subperitoneal Lipomata with notes of two cases. Professor J. W. Byers read a paper on the Early Treatment of Acute Puerperal Infection. In the discussion following the reading of these communications the President, Dr. J. S. Darling (Lurgan), Mr. A. B. Mitchell, Dr. Campbell, Dr. W. A. Wadsworth, Dr. R. M. Fraser, Dr. H. J. Ritchie, Dr. J. C. Martin (Portrush), Dr. W. A M'Keown, Dr. J. T. Creery (Coleraine), and Dr. W. Calwell took part. Professor Byers proposed the following motions of which he had given notice:—

1. That in the opinion of the Ulster Branch the present position of the Poor-law medical service is most unsatisfactory and calls for immediate amendment in respect to (*a*) remuneration, (*b*) annual holidays, and (*c*) superannuation.
2. That the council of the British Medical Association be requested to adopt such measures as may be considered advisable to redress as quickly as possible the grievances of the Irish poor-law medical officers.

In submitting these motions, Professor Byers referred to the grievances complained of, the results of these disabilities, the demands of the medical officers, and the methods by which these grievances could be redressed. Dr. M'Keown (Senator of the Royal University), in seconding the adoption of the motions, spoke of the importance of a firm stand being made all along the line by the medical profession on this important question. Professor J. Symington, F.R.S., in supporting the motions, said that he had advised Belfast students not to enter the service unless the disabilities complained of were removed. The motions were passed unanimously.

Belfast Maternity Hospital.

An excellent site in a thickly populated district of Belfast has been selected for the new Maternity Hospital which it is hoped will soon be erected.

Royal Medical Benevolent Fund.

From the report of the Belfast and County Antrim Branch of the Royal Medical Benevolent Fund of Ireland presented to the members at the annual meeting in the Medical Institute, Belfast, on May 15th, it appears that the gross contributions from all sources were £172 7*s.*, less expenses £11 6*s.* 9*d.*, leaving a net sum of £161 0*s.* 3*d.* in the hands of the central treasurer. This is £4 18*s.* 7*d.* less than last year, and £19 7*s* 4*d.* below 1901. Out of 198 medical men in Belfast, 153 contributed £100 10*s.* 6*d.*, but 45, or 25 per cent. of the profession, gave nothing. Of the 213 country members 43 gave £32 2*s.*, but 170 made no response to the appeal. The amount contributed by the profession in Ireland averages only about 2s. per head per annum. Officers for the ensuing year were elected, Sir W. Whitla being appointed President, and Dr. R. Purdon secretary and treasurer.

Irish Poor-law Guardians and their Medical Officers.

The conflict between the medical officers of dispensaries and Poor-law union hospitals and the new boards of guardians has recently become more urgent every week. It seems now to be approaching an acute phase. At a meeting of the Omagh board on May 22rd, Mr. George Murnaghan, M.P., in the chair, a letter was read from the Tyrone branch of the Irish Medical Association signed by the President (Dr. E. C. Thompson, M.P.), in which it was stated that the branch had unanimously resolved to adopt the rules of the association in reference to the salaries of dispensary and workhouse medical officers as well as to the sums agreed upon as payment for substitutes, &c. The letter went on to state that "the Irish Poor-law officers were determined to adopt the system by which the tenant farmers of Ireland have effected so many useful reforms—viz , combination—and they intend to vigorously enforce the by-laws of the association which will prevent them in future making a consultation or helping in any way any Poor-law medical officer or other medical practitioner who does not support this association or who fails to help them in their efforts to obtain the redress of their legitimate grievances." When the letter had been read the chairman of the meeting said: "I think that we should draw the attention of the Local Government Board to this letter and ask them if they are going to give to these men the same treatment that they gave to the tenants when they conspired to prevent men doing what they had a legitimate right to do. It is intimidation, for they threaten any doctor who does not fall in line with them." Another difficulty has recently taken place as regards this matter in the Tullamore Union in connexion with the election of a medical officer for the Killoughey dispensary district, in which tenders were invited on the same terms as heretofore—namely, £100 as dispensary officer and £20 as medical officer of health. At the last meeting of the board no application was made and the guardians were obliged to advertise a third time for candidates for the position. The chairman, Mr William Adams, J.P., said that "he did not blame the medical officers of Ireland for organising to protect their interests, but he certainly denied their right as employés to fix their own salaries. Their duties had not increased under the new Act and if they were being underpaid it was regrettable and unfortunate that they did not look for increases when the landlords were paying half the poor-rate and when recoupment in respect of such increases from Imperial sources was more favourable. Instead of that they selected a time when the ratepayers would have to bear the whole burden, and when popular local government was so keenly observed and criticised." He concluded by saying that the guardians would fight the matter to the bitter end, and from what he had heard of the letters sent to candidates by the Irish Medical Association he would state that if they came from any of the people's organisations with which he was connected there would be imprisonment for some of the members for intimidation and boycotting. The Local Government Board has written to the Downpatrick board of guardians (under date of May 21st) saying it considers the tone of Mr. Olpherts's letter[1] to the guardians as most unbecoming and stating that if a dispensary medical officer is absent from his district the guardians have a right to satisfy themselves that proper arrangements are made for the discharge of the duties during such absence, but it is only fair to Mr. Olpherts to indicate that he says that he left the district in charge of a thoroughly competent medical man and by arrangement.

Workhouse Consumptive Patients.

The Rev. Dr. Henry, Roman Catholic bishop of Down and Connor, has written to the Belfast board of guardians offering them a site at Orlands, a beautiful estate which he has purchased on Belfast Lough, free of rent, on which to erect wooden cottages or bungalows for 100 or more consumptive patients. The sisters of mercy in charge of Orlands undertake to give their own valuable assistance as well as the services of trained nurses for the relief and benefit of the patients. The bishop was thanked for his generous offer and the matter was referred to a committee of the infirmary committee.

The Increase of Insanity in Ireland.

That insanity is steadily increasing in Ireland seems
to be an admitted fact and
ference of representatives
district asylums in Ireland
increase of insanity, the manage
readjustment of Government aid.
Dublin, on Dec. 31st, 1893, there
register, and on April 22nd of this
in all parts of the country there is
crowded asylums. No adequate ex
whether apparent or, as most auth
been offered.

May 25th.

PARIS

(FROM OUR OWN CORRESPONDENT.)

Tetanus Infection conveyed by

AT the meeting of the Acade
May 12th M. Dieulafoy mentioned
suffered from pulmonary consum
who died 11 days after receiving
serum which it was hoped woul
This was the twenty-third time
ment had been followed by a fa
said that he would now abandon
M. Hayem remarked that ordin
was easily sterilised, always app
for the arrest of hæmorrhage.
the laying down of rules fo
gelatinised serum under condi
accidents impossible. M. Di
that in Germany the calves
obtained were carefully selec
that the tetanus bacilli in th
much from the animal which
the dust in the drying-rooms
best plan was therefore to put

Dys

At the same meeting of
Vaillard and M. Dopter subr
was a very complete and
bacterial dysentery, based up
garrison of Vincennes from J
Since the researches of M. Cha
were carried on about 16 yea
discovery of the bacillus of ep
found necessary to recognise tw
which is due to amœbæ (dyse
the other to bacilli (Europea
dysenteric patients at Vincenne
found Chantemesse's bacillus,
motionless, not decomposing la
and therefore occupying an in
the ordinary colon bacillus and
They found it in the region ro
and in the mesenteric ganglia.
observed it; they saw cultures i
serum of dysenteric patients ir
Filtered cultures of it inje
rabbit, the dog, and the pig
a disease which was identical
panied by fever, intestinal ulcer
tion of serum and blood, general
blood of animals immunised by
furnished a serum possessed of
dysenteric subjects, so that the
means of serum treatment might be p
future.

Strike of the Resident Medical O

A singular dispute has just arisen
body and the resident medical officers
hospitals (*hospices*) of Reims. In conseq
existence of differences of opinion
appointed steward of the Hôtel Dieu and the
medical officers the matter was brought
committee which upheld the steward and

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[1] THE LANCET, May 23rd, 1903, p. 1425.

officers to pay fines amounting to a total of 70 francs (£2 16*s.*). The medical officers, however, refused to obey this order and quitted their posts, leaving only one of their number to attend to cases of accident.

New Methods of employing Antitoxic Sera.

At a recent meeting of the Academy of Science M. Calmette gave an account of a very ingenious method of using anti-tetanic serum, the serum being dried, pulverised, and applied as a dressing to wounds which are presumably infected by tetanus. Anti-tetanic serum has hitherto not fulfilled the expectations which were hoped for from its use. Administered as a preventive it exercises a prophylactic action for some 15 days, but employed in patients already attacked by tetanus it is very uncertain in its action even though it be employed by means of the heroic method proposed by Borrell and which consists in injecting serum into the cerebral substance through an opening made by a trephine. Calmette used guinea-pigs for his experiments and infected wounds made in them with earth which was full of tetanus germs, the guinea-pigs all dying within four or six days. Other guinea-pigs, however, treated in the same way as regards infection, but whose wounds were dressed with the powdered anti-tetanic serum all lived. The dressing must be applied within six hours after the wound and if applied later the results are uncertain. This discovery should be of great interest to employers of navvies and others engaged in excavating works, among whom tetanus is frequent and whose wounds are so often infected by the earth, all the more because a serum prepared in this manner preserves its properties indefinitely and seems capable of many applications. In Indo-China, for example, some 20 per cent. of the newly-born children die from tetanus owing to infection by the umbilical cord when the dry portion falls off. M. L. Martin of the Pasteur Institute has brought forward a somewhat similar method of treatment by employing anti-diphtheritic serum as a dressing to the false membranes of diphtheria. M. Martin obtains his serum in a different way from the method of Behring and Roux, as he injects directly into the veins of the horse the microbes of diphtheria after having been heated up to 100° C. The serum [illegible]
superior to [illegible]
is applied [illegible]
causes ther [illegible]
off and the [illegible]
is thus thoroughly disinfected, and in order to render the effect more prolonged M. Martin proposes to incorporate his serum with gum so as to form a jujube which can be slowly sucked. We have here a method of applying diphtheritic serum which without dispensing with the injection of serum in definite cases of diphtheria will most likely diminish very largely both the gravity and the duration of the malady and probably, too, the method may act as a preventive in times of epidemic if applied to patients threatened with diphtheria.

May 26th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Sanatoriums for Tuberculous Patients.

THE German central committee fo [illegible]
sanatoriums for tuberculous patients [illegible]
in Berlin on May 17th. About 200 members were present,
[illegible] (Secretary of State), Herr
[illegible] Professor Leube of Würzburg,
[illegible] of the Government Medical Department). Count Posadowsky, who presided, delivered an address in which he called attention to the question of the housing of the poorer classes. He said that healthy dwellings were a prime requisite in the prevention of tuber- [illegible]

(2) they must avoid taking any course which might interfere with the action of the benevolent societies the object of which is to provide such dwellings. Baron von der Knesebeck, chamberlain to the Empress, said that the committee had done a great deal for male adults suffering from pulmonary tuberculosis but that it had not shown equal consideration for women and children. He had therefore been commanded to express Her Majesty's hope that additional sanatoriums for the reception of women and children would be provided. Professor Pannwitz then read the annual report on the sanatoriums, the Erholungsstätten,[1] the dispensaries, and other institutions with which the committee is connected. Professor von Leyden followed with a paper on the Efficacy of Sanatorium Treatment. After sketching the history of the movement for the prevention of tuberculosis in Germany he referred to the decrease in the mortality from that disease, a result which, he said, was in no small degree due to the sanatoriums. He was sorry to find that the sanatorium system had been unfavourably criticised by some medical men who seemed not sufficiently to have remembered that the lives of thousands of patients had been prolonged by means of the food, nursing, and medical care which they received in the sanatoriums and that the results would be still better if the patients could be permitted to make a longer stay in them. Sanatoriums, of course, were not a panacea, and their work required to be supplemented by other means such as the dispensaries, the Erholungsstätten, the asylums for incurable patients, and the seaside homes for children. In England and France pulmonary tuberculosis had also been successfully opposed by means of general hygienic measures, but the sanatorium system was not so well developed in these countries as in Germany where sanatoriums were established in connexion with the workmen's insurance clubs and were partly supported out of the funds of these institutions. In conclusion, Professor von Leyden advocated the compulsory notification of tuberculosis. Herr Gäbel, president of the Imperial Insurance Office, read a paper compiled from the enormous statistical material at his disposal showing that among 1000 men at various age periods who received sick pay under the workmen's insurance laws the proportion of those suffering from tuberculosis was 549 per 1000 from 20 to 24 years, 509 per 1000 from 25 to 29 years, and 429 per 1000 from 30 to 35 years; for the female sex the corresponding proportions were 425, 343, and 258 per 1000. There was a predominance of factory workers as compared with country labourers. The workmen's insurance institutions (Landes-Versicherungs-Anstalten) had provided for 16,489 patients
[illegible] m tuberculosis at an average cost per head of
[illegible] 17 15*s.*). Herr Pütter, town councillor of Halle,
[illegible] work of the anti-tuberculosis association there.
[illegible] the medical officer examined patients sent to
[illegible] resident of the association. Thermometers were given to them and they were shown how to take their temperatures, those who could not do this properly being visited at their homes by nurses and deaconesses connected with the association. The sputa were examined at the municipal laboratory free of charge. The patients also received printed instructions on the subject of hygiene and in certain cases money to be spent on food; they were also supplied with various articles of table service so that they need not have recourse to those which were used by the other members of the family. In the case of unmarried persons living alone the association took lodgings for them and disinfected the rooms with formalin from time to time. The whole town was divided into 28 districts in each of which a nurse or a lady visitor was appointed to look after the patients of the association. The association worked in harmony with the university clinics and other hospitals and also with the medical men who were quite willing to hand over the care of their poorer patients to the association. Dr.
[illegible] Berlin gave an account of what was being
[illegible] with especial reference to the voluntary
[illegible] berculosis and the proceedings terminated with a visit to the sanatoriums of the Berlin insurance institution (Landes-Versicherungs-Anstalt).

Medical Men in Parliament.

The number of medical men in the German Parliament has hitherto been smaller than in France and some other countries and the medical members of the Reichstag practise their profession only to a very limited extent. As medical interests have therefore but seldom received in Parliament an amount of consideration commensurate with the importance of the profession, it is a favourable sign that the number of medical men who have offered themselves as candidates at the forthcoming elections is greater than on former occasions. According to the medical journals the following members of the profession have been nominated in the places mentioned: Dr. Rügenberg in Bonn, Dr. Höffel in Zabern (Alsace), Dr. Krzyminski in Inowrazlaw, Dr. Bernstein in Torgau, Dr. Hollstein in Zittau, Dr. Mugdan in Görlitz, Dr. Leonhardt in Kiel, and Dr. Weyl in West Priegnitz. The candidature of Dr. Mugdan will be regarded with particular interest by medical men, as he is one of the founders of the "free-choice society" and holds a prominent position in the profession.

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[1] Erholungsstätten are places where tuberculous patients spend the day in the open air, returning to their homes at night. There are several in the vicinity of Berlin.

May 25th.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THE seventy-sixth session of the General Council of Medical Education and Registration was opened on May 21st at the office of the Council, Sir William Turner, K.C.B., the President, being in the chair.

The regular date for the summer meeting of the Council is on the fourth Tuesday in May, but this year, owing to Whit-Monday falling on June 1st, it was felt by the Executive Committee that if the Council met on the regular day the business probably could not be finished before Whitsuntide, hence the alteration of the date of the meeting.

The *personnel* of the Council has undergone some changes since the last meeting in November. Sir William T. Gairdner, owing to failing health, found it necessary to resign the representation of the University of Glasgow and the University appointed as his successor Dr. T. McCall Anderson, the professor of medicine. The period of office of Sir Hector C. Cameron, the representative of the Faculty of Physicians and Surgeons of Glasgow, has also expired since November last. Sir Hector Cameron having intimated that he did not intend to seek re-election Dr. John Lindsay Steven was appointed in his place.

Sir William Turner in his Presidential Address, of which we give an abstract elsewhere, after referring to the resignations which we have just mentioned, spoke as to the inspections which had been held of the examinations of the various licensing bodies. Other points to which he referred in his speech were the financial condition of the Council, the Medical Act of 1902 under which the Medical Council of Canada had been constituted, and the Bill which had been introduced and read the first time in the House of Commons for amending the penal and disciplinary powers of the Council and of the licensing bodies.

On Saturday, May 23rd, a discussion arose concerning the Pharmacy Bill promoted by Mr. Lough, M.P., Sir Hugh Beevor asking the President whether his attention had been called to the fact that the Bill contained no exemption of registered medical practitioners from its provisions and whether the Council should not take some steps with reference to this or any other Bill promoted on similar lines to see that the interests of medical practitioners are properly protected. We ourselves called attention in THE LANCET of April 4th, p. 982, to the fact that the Bill was against the interests of practitioners and finally the Council, on the motion of Dr. MacAlister, decided that the President should lay the matter before the Lord President of the Privy Council and should state that in the opinion of the General Medical Council the encroachment upon the rights of the medical profession ought not to obtain the sanction of Parliament. The interesting point about the discussion was the opinion of Sir Hugh Beevor and of Sir Victor Horsley that the matter was a proper one to be brought before the General Medical Council, but as we have previously pointed out the General Medical Council does not seem to have any legal status whatever as being a body for protecting the interests of the profession except in so far that it can purge the profession of offending members. Hence we are glad to see that the matter will be laid before the Lord President of the Privy Council, because of the weight of the opinion of this body with the Government.

The Council at the sitting on Monday, May 25th, took into consideration two penal cases, that of Dr. James Kirkland of 7, Ladbroke-square, W., and that of Mr. Edward John Smith. Both these gentlemen appeared in person, the case of the latter gentleman being an adjourned one. Dr. Kirkland undertook that he would not again repeat his conduct and it having been proved that Mr. Smith had given no grounds for complaint since his last appearance and that he had also undertaken to discontinue the practice complained of both gentlemen were informed that the Council would not proceed further against them. Other penal cases of a comparatively unimportant nature were proceeded with on Tuesday, May 26th.

THURSDAY, MAY 21ST.

The seventy-sixth session of the General Council of Medical Education and Registration was opened to-day in the premises at 299, Oxford-street, London, W. Sir WILLIAM TURNER, the President, was in the chair and there was a full attendance.

New Members.

The following official notifications were read by the Registrar (Mr. H. E. ALLEN):—

Glasgow, April 6th, 1903.

We, the Faculty of Physicians and Surgeons of Glasgow, in pursuance of the power given to us by the Medical Act (1886) do hereby appoint Dr. John Lindsay Steven to be a member of the General Council of Medical Education and Registration of the United Kingdom for the term of three years from the 6th day of April, 1903.

ALEXANDER DUNCAN, Secretary.

91, West Regent-street, Glasgow.

DEAR SIR,—I have to inform you that Sir William T. Gairdner, K.C.B., M.D., has intimated to the Court his resignation as representative of the University of Glasgow on the General Medical Council, and at a meeting held yesterday the University Court appointed Professor Thomas McCall Anderson, M.D., the University, Glasgow, in Sir William Gairdner's place for a period of five years from 14th May, 1903.

Yours faithfully,
ALAN E. CLAPPERTON,
Secretary, Glasgow University Court.

The Registrar, General Medical Council.

Dr. STEVEN was introduced to the Council by Dr. P. HERON WATSON and Professor MCCALL ANDERSON by Dr. D. W. FINLAY.

The President's Address.

In his address at the opening of the seventy-sixth session of the General Medical Council, the PRESIDENT commenced by referring to the reasons which had made it necessary that the Council should meet on a Thursday instead of the fourth Tuesday in May. He then mentioned with regret the resignation of Sir William Gairdner, who, he said, had that morning sent him a letter, the conclusion of which was as follows:—

> It only remains to me to ask you, as President, to be the means of conveying to my colleagues the deep sense of the kindness and consideration with which I have always been treated as the representative of the University of Glasgow, and my deep regret at the sudden termination of our always pleasant intercourse at the Council Board.

The President, continuing, offered the welcome of the Council to Sir William Gairdner's successor, Professor McCall Anderson, and went on to express the value which the Council attached to the services of Sir Hector Cameron, who had also resigned. To Dr. Lindsay Steven, his successor, the Council looked for a continuance of his predecessor's good work. The reports of the visitor and inspectors of the final examinations of all the licensing authorities with the exception of the Scottish universities had for the most part been received. The Scottish universities were to have been inspected during the summer but owing to the regrettable illness of Sir George Duffey, the Council's inspector, it remained for the Council to decide whether it would appoint a new inspector or hold the inspection over until next year in the hope that Sir George Duffey would then be able to undertake the task. This latter course, said the President, was the one which appealed to himself. The President continued:—With regard to finance, the Council will recollect that at the last meeting a report was presented by the Financial Relations Committee accompanied by a draft Bill to amend the Medical Acts, one of the objects of which was, by raising the fee payable on registration to a sum not exceeding £10, to augment the income of the Council so as to make it sufficient to meet the increase in its expenditure. On Dec. 2nd the Council resolved to refer the report and draft Bill back to the committee for further consideration and members of the Council were invited to make suggestions in regard to "economies in expenditure." Many suggestions have been received which have been grouped and summarised by our Registrar and circulated amongst the members of the Council. These will have to be considered by the Financial Relations Committee and reported on to the Council. I may recall to the Council that in a paragraph in the report of the Financial Relations Committee (Minutes, Nov. 29th, 1902, p. 137) it was stated that I had suggested that a memorial should be framed for presentation to the Privy Council in explanation of the condition of our finances. A memorandum on this subject which may serve as the basis of a memorial has been prepared and circulated amongst the members of the Council and I propose to ask you to consider it before the close of the meeting. In my address at the commencement of last session I called attention to the Medical Act, 1902, passed by the Canadian legislature, and approved by the King, under which a Medical Council of Canada was constituted. Power was given to establish a register of medical practitioners in Canada and to provide them with the status required for the establishment of reciprocal relations between the Dominion of Canada and the United Kingdom, such as on the one hand would enable practitioners with recognised Canadian diplomas to acquire the right of registration under our home Medical Acts and on the other would enable practitioners registered under these Acts to be admitted to the Canadian Register. In order to bring the Canada Medical Act into operation and to enable the Canadian practitioners to obtain the benefit of Part II. of the Medical Act, 1886, it is necessary *inter alia* that the provincial legislatures in Canada should renounce their present right of independent registration and consent to the formation of a register for the whole Dominion. From information which I have received it seems that at least one of the provinces is not prepared to adopt this course and so long as this attitude is maintained the whole Dominion of Canada will, under the present law, be excluded from the provisions of Part II. of the Act of 1886. It is much to be regretted that local influences should have interfered with the adoption of the Act throughout the Dominion, for as by Section 36 of the Medical Act, 1858, no person can hold any appointment as a physician, surgeon, or other medical officer in the military or naval service of the Crown, or fill certain civil appointments, unless he is on the Register of the United Kingdom, Canadian practitioners will therefore continue to labour under their present disability. Seeing that practitioners who possess diplomas granted in New Zealand and in three of the States of Australia, the universities in which confer medical degrees, are admitted to the Medical Register of the United Kingdom, and are thereby qualified to hold office in the public service, it is a matter for consideration whether something should not be done to put our Canadian brethren on an equal footing. Legislation to accomplish this purpose would not be complicated in its character. The 17th and 27th Sections of the Medical Act, 1886, Part II., might be so modified as to enable His Majesty by order in Council to declare that when a British possession is under both a central and a provincial or local legislature this part of the Act might apply to any province which, in the opinion of His Majesty, affords to the [illegible] ers of the United Kingdom such [illegible] His Majesty may seem just. A [illegible] Act in this direction is to be preferred to the proposal originally made by General Laurie in a Bill of last year again before Parliament, by which colonial practitioners would be admitted to our home Register without a corresponding equivalent being granted in the colony. But a second Bill, also introduced by General Laurie, provides the necessary modification should the Canadian Medical Act, 1902, not become operative. It would also in course of time bring all the provinces in a British possession into line, as any province which might at first be disinclined to concur would before long find that the medical practitioners within its area were placed at a disadvantage compared with those practising in adjoining provinces. The Bill prepared a few years ago at the request of the Council for amending the penal and disciplinary powers of the Council and the licensing bodies has been introduced into the House of Commons by our colleague Sir John Batty Tuke and read a first time. Its place as determined by the ballot is low down on the list and unless something unexpected arises to improve its position and to remove an opposition threatened by some Members of the House of Commons it is doubtful if it can make further progress during the present session. Mr. Norman King, one of the clerks in the office, has very usefully occupied his leisure by compiling on his own initiative an analytical index of the contents of our minutes from the year 1886 to 1902. Along with the index volume published in 1888 the Council will now have the means of referring to the subjects which have been under its consideration from its foundation in 1858 without the loss of time entailed in consulting the indices in the separate volumes. The Executive Committee has framed a motion on the matter which will be submitted to the Council by the chairman of business. The disciplinary cases to be brought before you during the session are unusually numerous and some of the offences alleged to have been committed are of a nature which seriously affect the character of the accused practitioners.

It was moved by Dr. MACALISTER, seconded by Mr. BRYANT, and carried by acclamation:—

> That the President be thanked for his address and requested to let it be printed in the minutes.

Business Committee.

On the motion of Dr. MCVAIL, seconded by Mr. BROWN, it was agreed that the following should constitute the Business Committee: Dr. MacAlister (chairman), Mr. Bryant, Dr. Bruce, and Sir Christopher Nixon.

A Question of Procedure.

Sir VICTOR HORSLEY at this stage of the business put a question with respect to the following notice of motion he had placed on the paper:—

> [illegible] of the examination in [illegible] t Examining Board in [illegible] London, and the Royal [illegible] h the remarks by the [illegible]

He wished to put the question to the Examination Committee. He understood that the customary procedure, which was that the chairman of the committee should draw up a draft report and send it round for consideration, had in this instance not been followed and he wanted to know why that procedure had not been followed.

The PRESIDENT: I think the Examination Committee will have a report.

Sir VICTOR HORSLEY: This session?

The PRESIDENT: I hope so; so far as the bodies have been inspected and so far as the Council has received their comments.

Sir VICTOR HORSLEY: We ought to have all these reports before us. The chairman of the Examination Committee ought to tell us why these were not circulated.

Mr. BRYANT, as chairman of the Examination Committee: The Examination Committee has not met to consider a report. It was understood that there would be no such report until all the papers, all the reports on primary education, could be obtained and considered together, so that the results could be compared.

Sir VICTOR HORSLEY declined to admit any understanding of the kind suggested. In the ordinary course the reports must be circulated and Mr. Bryant's explanation was not at all satisfactory.

The PRESIDENT: Well, go on with the next business.

Professional Medical Examinations.

The REGISTRAR presented annual tabulated statements for the year 1902 as follows:—

(*a*) Table showing results of professional medical examinations during 1902.

(*b*) Table showing results of professional examinations for qualifications in sanitary science, public health, or state medicine during 1902.

(*c*) Table showing results of professional dental examinations during 1902.

session of two days, costing [illegible]
of the Midwives Registration [illegible]
the Lord President of the P[illegible]
time had to be devoted to [illegible]
several previous years and [illegible]

[illegible] consequence of the
[illegible] sted to it and addi-
[illegible] ought and time had
[illegible] racter was, however,
[illegible] separate funds were
[illegible] All expenses arising
[illegible] eliminated as far as
[illegible] the result of this
[illegible] y follows that its
[illegible] If the period before
[illegible] e subsequent to it be
[illegible] the former period of
[illegible] ccasions in which it
[illegible] be held during the
[illegible] upied with business
[illegible] od of 25 years, from
[illegible] it was not necessary
to hold at least two sessions and the annual average number of days [illegible]

[illegible] des the annual average expenditure for [illegible]

—	Fees and expenses for the attendance of members.	Printing.	Law expenses.	Election expenses.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1869-1878	1931 5 3	762 6 6	54 4 11	—
1893-1902	3374 3 4	1194 5 4	666 5 4	185 19 0 From 1886-1902.
Showing an average annual increase of ..	1442 18 1	431 18 10	612 0 5	185 19 0

[illegible] o members has been sufficiently
[illegible] mber of members and not any
[illegible] Act of 1858 to be paid with the
[illegible] members The increase in the
[illegible] inevitably from the extended
[illegible] part also from the constantly
increasing size of the registers that are to be maintained and [illegible]

[illegible] connexion with questions of education and registration.

The widespread evils to the public resulting from unqualified practice—evils encouraged largely by the, at that time prevalent, employment by registered medical practitioners of unqualified assistants—then demanded attention and large sums have since that date been paid in legal expenses for the public benefit in successfully lessening such of those dangers as arose from the wrong conduct of members of the profession. Although the improper practice of employing unqualified assistants has been largely put a stop to, other forms of professional misconduct have arisen which have called for the attention of the Council [illegible]

[illegible] worse by the fact that its income is not growing. Practically the income of the Council and its branches is derived from registration fees. Owing to the efforts that the Council has made during recent years to benefit the public by improving medical education and by materially raising the standard of examination both in general and professional subjects the number of persons entering the profession and the fees for registration paid by t[illegible] If we
take the last two periods of ten years—
1893 to 1902—while 13,644 practitione[illegible]
period only 13,665 were registered in t[illegible]
79 The income, therefore, from fees [illegible]
what diminished and is not likely to [illegible]
that there has been a fall annually in the number of medical students for some years past. The average number of students entering during the period from 1879 to 1893 was 1708, but owing to the higher standard demanded and the increased length of a medical course the [illegible]

few exceptions, sufficient. since that year a regular deficiency has been annually disclosed as follows:—

	£ s. d.
1896	633 4 9
1897	1,538 9 8
1898	2,353 11 11
1899	1,573 14 6
1900	1,037 11 1
1901	1,608 12 0
1902	1,332 18 1
	10,033 1 11

Annual average deficit = £1433 5s. 11*d*.

[illegible] revenue.

It would not be for the welfare of the community that the long exerted efforts of the Council to promote the efficiency of the profession should be relaxed, nor would it be desirable that its vigilance should be less exercised in the discipline of the profession, however [illegible] other functions could be defrayed out of its present income mainly derived from registration fees. WM. TURNER, President.

May 1st, 1903.

In Camerâ.

The next items of business on the day's programme were: (1) To receive *in camerâ* a recommendation by the Penal [illegible] to a letter from Sir John Tuke on a penal case. The public accordingly were asked to withdraw and were not admitted to the council chamber during the rest of the sitting, which, in accordance with a resolution passed at an earlier stage of the proceedings, was not prolonged many minutes after four o'clock in the afternoon.

FRIDAY, MAY 22ND.

The Council resumed to-day, Sir WILLIAM TURNER, the President, being in the chair.

Proceedings *in camerâ*, which the President explained had not been concluded on the previous day, were continued.

The Dentists Register.

Mr. TOMES, on the admission of the public to the chamber, called attention to the inaccuracy of the Dentists Register by reason of its (1) not including all registrations; (2) in respect that a number of names had gone off it, though the persons bearing them were still living and practising at the same address; and (3) that a considerable number of names of persons who were dead still remained on the Register. He thought communication with the Pharmaceutical Society and other bodies might help to get the required accuracy.

The REGISTRAR explained the steps that were taken by him to secure accuracy and assured the Council that all voluntary help which they could obtain was availed of. He certainly should be glad to give attention to anything brought to his notice.

Apothecaries' Society of London.

On the motion of Sir HUGH BEEVOR, seconded by Mr. BRYANT, it was agreed—

> That Mr. Peyton Todd Beale, F.R.C.S., be appointed an assistant examiner in surgery to the Apothecaries' Society of London for a period of four years, vice Mr. C. Stonham, F.R.C.S., who retires by rotation.

Sir George Duffey's Illness.

Dr. MACALISTER moved :—

> That in consequence of the illness of Sir George Duffey, the Council's inspector of final examinations, the inspection of the examinations of the Scottish universities be postponed till next year.

He thought it was advisable to pass such a motion, so that Sir George Duffey might have the opportunity to finish the cycle of inspection and let the Council have reports that would be conformable. There was no great hurry in regard to the Scottish universities which he considered could safely be trusted to go on without Sir George Duffey's visitation for another year.

The motion was seconded by Dr. NORMAN MOORE.

Sir CHARLES BALL remarked that if the Council passed such a motion it would very much gratify Sir George Duffey who felt deeply his present inability to complete the work which the Council had intrusted to him.

After some words of appreciation of Sir George Duffey's work and services from Dr. BRUCE

The motion was agreed to.

Dr. ATTHILL, on behalf of Sir George Duffey, thanked the Council for coming to such a resolution.

Restoration to Medical Register.

It was moved by Dr. MACALISTER, seconded by Mr. BRYANT, and agreed to :—

> That the following report from the Executive Committee in regard to a suggested change in the Standing Orders be received and entered in the minutes—
>
> The Executive Committee have considered the following motion which on Dec. 2nd, 1902, was referred to them by the General Council with a request that they should consult the legal advisers of the Council on the subject: "That in the Standing Orders for the restoration of a name to the Medical Register, Chap. XVII., Clause 2. Subclauses 3, 4, and 5, the words Penal Cases Committee be substituted for the words Executive Committee." The Executive Committee, having consulted Mr. Muir Mackenzie on the subject of the motion, are advised that having regard to the special function of the Penal Cases Committee as defined by Chapter IX., Section 5, of the Standing Orders and to the powers of the Executive Committee under the Medical Acts, applications for restoration after penal erasure are most appropriately dealt with by the latter committee. The Executive Committee are therefore not prepared to recommend that the proposed change should be made in the Standing Orders.

Dental Business.

The REGISTRAR read the following report from the Executive Committee on the dental business transacted by it since the previous session of the Council.

> 1. The prescribed conditions having been duly fulfilled in each case, the names of the under-mentioned persons have been restored to the Dentists Register, from which they had been erased in conformity with the provisions of Section 12 of the Dentists Act, 1878: Alfred G. Annette, Walter Bennett, William V. Corbet, Henry W. Edmondson, Charles H. Fentiman, Joseph Hanreck, Frederick J. Lea, William Morris, Matthew H. Nisbet, Lawrence Read, George W. Roberts, Thomas R. Smart, and Francis Watts.
> 2. A question was considered by the committee from a medical practitioner respecting the position of practitioners in regard to the administration of anæsthetics for registered dentists acting for dental companies and they answered the inquiry by stating that the only answer they could give was to call his attention to the resolution of the Council in regard to the administration of anæsthetics.
> 3. The committee received from the Colonial Office an Act relating to the practice of dentistry in South Australia and referred it to the Dental Education and Examination Committee for their information.
> 4. A communication was also received from the Colonial Office seeking information as to the position of British dentists in Germany and the committee replied that: "Inasmuch as under the Dentists Act no provision is made for the establishment of reciprocal relations with foreign countries the Council has had no occasion to inquire into the privileges (if any) accorded to British dentists in Germany. German dental qualifications are not recognised as conferring any rights in this country. The committee would be obliged to receive from the Colonial Office any information on the subject which may be obtained through the Foreign Office."
> 5. The committee further received from the Colonial Office an Act to provide for the registration of dentists to practise in Queensland and referred it to the Dental Education and Examination Committee for their information.
> 6. They considered a complaint from a medical practitioner in regard to continued dental advertising by a registered dental student.
> 7. They considered also an application made on behalf of a Canadian dentist for registration in the Dentists Register and referred the matter to the Dental Education and Examination Committee for consideration and report.
> 8. The committee have also had under their consideration an application for registration under Section 37 of the Dentists Act by a dentist who was a pupil at the time of the passing of the Act.

On the motion of Dr. MACALISTER, seconded by Mr. BRYANT, this report was received and entered on the minutes.

Examination in Chemistry, Physics, and Biology.

Sir VICTOR HORSLEY had the following notice on the paper :—

> To call attention to the report by the visitors of the examination in chemistry, physics, and biology of the Conjoint Examining Board in England, of the Royal College of Physicians of London, and the Royal College of Surgeons of England, together with the remarks by the bodies inspected, and to move a motion thereon.

He said that before going on with his motion he should like to ask Mr. Bryant whether he was or was not going to present a report from the Examination Committee.

The PRESIDENT: There has been laid on my table this morning a report by the inspector and visitor of the examination of the Apothecaries' Society. That is a complete report of that particular examination.

Mr. BRYANT said that the matter was considered by the Examination Committee yesterday afternoon and it did not come to any definite conclusion about it. It certainly had not prepared a report to the Council, but if the Council was really desirous that some report should be brought forward the committee would be willing to do so. As the spokesman of the Examination Committee he had been asked to put to the Council the question whether it did really wish a report to be presented at the present time. In thinking the matter over last night he felt that the committee was in difficulty. In the report that had been presented to the Council the inspectors said, "We have not been able to compare this examination with any others of its own class, so that we are contrasting it with an ideal standard existing in our own minds." The inspectors should have something by which to make a standard of comparison. He understood that a report had been presented with reference to the Apothecaries' Hall, Dublin; he also understood that the inspectors had reported on the Scottish examination, and it occurred to him that now that these gentlemen had more information it would be more satisfactory if they could kindly give the Council a report with regard to the other bodies which they had already visited. He would like to propose that as the Irish body should be examined in June the Council should ask the two inspectors and visitors to report to it on the four bodies which they would have inspected. Then the Examination Committee should have something good to report upon; and he should have no difficulty in presenting a report which he trusted would be acceptable to the Council. When this report was first presented to him as chairman of the Examination Committee he felt that as the representative of one of the Royal Colleges it would be very difficult, if not quite impossible, for him to give an honest report bearing upon it. In the answers——

The PRESIDENT: You had better not go into the merits of the case at present. I understand that you are now giving your reasons for delay.

Mr. BRYANT: Very well; I shall not do so. I will simply conclude by moving:

> That the report be referred back to the visitors for further consideration and report, in view of the fact that subsequent to the date of their report the visitors have had an opportunity of comparing this examination with others of its own class.

Sir VICTOR HORSLEY: That is not an answer to my question at all.

Sir W. THOMSON: This motion by Mr. Bryant is not a proper one. Sir Victor Horsley has asked a definite question with reference to a specific performance by the Examination Committee. We have not got an answer, but instead of it Mr. Bryant has submitted a motion which is an entirely different thing.

Mr. BRYANT: I did answer the question of Sir Victor Horsley, though, perhaps, not directly. I said that the committee had not prepared a report upon this matter, but that it was willing to give a report if it was the express wish of the Council. I spoke as chairman of the Examination Committee and in that capacity proposed this motion.

Sir VICTOR HORSLEY: Really that is not an answer to my question! The standing orders provide that these reports shall go to the Examination Committee and that the Examination Committee shall report to this Council. That is the procedure. Mr. Bryant, instead of carrying out the usual procedure, took upon himself not to prepare a report on behalf of the Examination Committee for presentation to the Council to-day. Having done so he has put the Council in an entirely false position. Now I have asked for a direct answer to a direct question. I wish to know finally whether a report is going to be presented or not to this Council in the ordinary way during the present session?

Mr **BRYANT**: I have no report to present from the Examination Committee. But I have already said that it is willing to give a report if the Council specially ask for it

Sir **VICTOR HORSLEY**: It is not a question of willingness It is your duty. I want to know whether you are going to do your duty this session or not

Sir **JOHN TUKE**. May I ask how long this report has been in the hands of the committee?

Mr **BRYANT**. I can hardly say It has been in the hands of the Council for some months, but it has not been in the hands of the committee for so long The committee did not fully recognise that it would have to report upon it When the resolution was passed last session it was fairly understood that this report would not be considered until the other reports were before the committee.

Sir **VICTOR HORSLEY**. No, no I submit that six months is ample time for the chairman of the Examination Committee to have prepared a draft report which it was his duty to present to the members of the committee yesterday

Dr **FINLAY** said the point was whether the Council should wait until all the reports were complete and consider them together

Dr. **YOUNG** formally seconded Mr. Bryant's motion

Dr **WINDLE** said that he, as one of the inspectors, should absolutely refuse to take back the report If the motion was agreed to he should return the report identically in the same words, letter for letter If it was modified in any way it might be modified in a way which perhaps Mr Bryant did not desire But he absolutely refused to take it back

Mr **BRYANT** asked leave to withdraw his motion

Sir **VICTOR HORSLEY** objected to the motion being withdrawn until he had received an answer to his question

Dr **NORMAN MOORE** said that he could not vote for the motion The question before the Council was entirely one of business and expediency. Could time be saved by discussing [illegible] or should they arrive [illegible] the procedure sug[illegible]s a great deal to be [illegible] No self-respecting inspectors could take back their report with the view of modifying their statements It was not the function of the inspectors to correlate reports That was the duty of the Examination Committee He thought that the Council would save time if it were to discuss all these reports together and therefore he was opposed to Sir Victor Horsley's proposal

Sir **VICTOR HORSLEY**. I have made no proposal whatever.

Dr. **NORMAN MOORE** Well, I ought to have said notice of motion I think it would be a wrong course to send this matter back to the inspectors

Sir C **NIXON** urged on the Council to allow the motion to be withdrawn

On a division leave to withdraw was granted by 18 votes to 7

The **PRESIDENT** Well, we have come back to the point at which we started; do you propose anything, Sir Victor?

Sir **VICTOR HORSLEY** Certainly I move—

> [illegible] report during the [illegible] examination in [illegible]amining Board in [illegible]

This proposal was seconded by Dr **HERON WATSON** and was carried, 20 members out of 31 voting for it

Apothecaries' Hall, Dublin

Three reports on the final examinations of the Apothecaries' Hall, Dublin, were read by Mr **BRYANT** who presented them as chairman of the Examination Committee The first was in respect to an examination in July, 1902 (the inspector of which was Dr W. P. Herringham), and was as follows —

> Four candidates presented themselves for this examination One had been registered as a medical student in 1884 and had passed at the [illegible] authorities must conduct the whole examination of the candidate—that is, that he must be examined in all three subjects by one medical authority or combination of authorities" A second candidate having passed in medicine at the Hall received his Licence after passing in surgery and midwifery The third candidate presented himself in [illegible] He passed in medicine and [illegible]didate who presented [illegible] failed to pass in any [illegible] satisfacto[illegible] with the [illegible] standard [illegible] secretary [illegible] conductin[illegible] made wer[illegible] the inspector and examiners

Dr **MACALISTER** *reverted to the case of very exceptional* treatment of one of the candidates referred to in the foregoing, which he had called attention to on the previous day, and moved—

> That the President be requested to call the attention of the authorities of the Apothecaries' [illegible] the Examination Committee's re[illegible] and to state that in view of t[illegible] Council's advisers on the terms [illegible] regards the course taken by the [illegible]

Mr **BRYANT** seconded this motion

Mr **BROWN** pointed out that the case in question was a very unusual one He thought that another such was not likely to arise, the candidate had passed his examination in surgery before the passing of the Act of 1886 and he (Mr Brown) had yet to learn that that Act was retrospective

Dr **MCVAIL** asked Mr. Bryant if the Royal College of Surgeons of England gave a certificate for the "final" if a candidate passed in surgery at their examination

Mr **BRYANT**. I do not think so

Dr **MCVAIL**. Then how did this man get one?

M[illegible] at the document produced by [illegible]

[illegible] that case consideration of Dr MacAlister's motion should be postponed for the production by Mr Tichborne of the documents relating to the case He moved accordingly

Mr. **JACKSON** seconded the proposal which was agreed to

The second report read by Mr **BRYANT** *related to an* examination in October last It was.—

> There was but one candidate for the third examination, who had [illegible] In this examination he passed [illegible] agrees

The third report of the series was connected with examinations in January last which were conducted by the inspector, Dr W P Herringham, and the assistant examiners in surgery, Mr Alexis Thomson and Sir Henry Howse This report stated.—

> In the first examination there were two candidates One passed, the other was rejected in chemistry In the second examination there [illegible] passed In the third examination there was [illegible] standard of knowledge requir[illegible] is satisfied

All three reports were ordered to be entered on the minutes.

The University of Dublin

MR. **BRYANT** next read reports on the final examinations in the University of Dublin in May and June 1901, and November, 1902 the Council's visitor being Mr. Bryant and its inspector Sir George Duffey, M D.

The main report—that on May and June examinations—stated —

> The visitor and inspector report that the final or degree examinations of the University of Dublin are "sufficient" They draw attention to the fact that since the last visitation material changes [illegible]

> operative surgery assistance could be given by a past candidate to a [illegible] ring the presence of all [illegible] practice that seems to [illegible] in surgery both the visitor and inspector would have liked to see several doubtful candidates, who had shown weakness in the two cases allotted to them, further tested with a third or fourth case. In the examination in clinical medicine this method was freely used and with marked success.
>
> It is satisfactory to note that the time formerly allowed for answering the written questions and objected to at the former visitation as being too short has for some subjects been extended. But in other subjects—viz., surgery at the B.Ch. examination and in materia medica and therapeutics and in forensic medicine and hygiene—the limit is still much under the average time (half an hour for each question) recommended by this Council.

In respect to the November examinations the Examination Committee reported :—

> Section B of the first part of the final examinations of the University of Dublin was visited and inspected in November, 1902, at the express wish of the Council. The examination lasted four days; there were 21 candidates, one of whom retired after presenting himself at the oral examination in surgery. Every candidate is now orally examined in the presence of two examiners. The professors agree with the expressed opinion of the visitor and inspector that the supervision of the *vivâ voce* examinations is inadequate and recommend the board to take steps to make it efficient. Every written paper contained four questions and two hours were allowed to answer each paper. The oral examinations generally occupied from 10 to 15 minutes for each candidate, but there was no fixed time. The oral examination in medicine was conducted by the external examiner in the presence of the assessor, who is one of the professors of medicine in the university. The answering generally was poor.
>
> The oral examination in surgery was sound and practical. Both examiners examined each candidate and there were many museum specimens for use. The examinations in pathology and medical jurisprudence were altogether good. Of the 20 candidates who completed the examination 13, or 65 per cent., passed, and seven, or 35 per cent., were rejected. As a final conclusion, this supplemental visitation and inspection of November confirms the general opinion expressed in the report of May and June last, when the second part of the final examinations was visited and inspected: That the final examinations of the University of Dublin are sufficient.

These reports were received and entered on the minutes. An explanation in regard to faulty examination of one of the candidates was made by Dr. LITTLE and some discussion arose on a question which evolved as to the desirability of examining candidates rejected on a first examination who came forward on a second occasion without having in the interval taken the opportunity to study further. This matter was focussed by Mr. BROWN who, seconded by Sir VICTOR HORSLEY, moved :—

> That in the opinion of this Council it is undesirable that candidates who may have failed to obtain the minimum number of marks qualifying for a pass should be re-examined without bringing evidence of further study.

But discussion showed that it would be undesirable to press such a proposition and Mr. Brown withdrew his motion.

Election of Committees.

After agreeing to curtail the Saturday sitting by an hour so as to let committees have more time to prepare their reports the Council proceeded to ballot for the membership of the Executive Committee and the Penal Cases Committee. At the request of the PRESIDENT, Mr. Tomes and Dr. Lindsay Steven acted as scrutineers for ascertaining the result of the voting for the election of the Executive Committee and Dr. Atthill and Professor McCall Anderson as scrutineers for ascertaining the result in the election of the Penal Cases Committee. The President announced that the Executive Committee had been found to be constituted as follows: The President (*ex-officio*), Mr. Bryant, Dr. Payne, Dr. MacAlister, Dr. Pye-Smith, Dr. Heron Watson, Sir Charles Ball, and Sir Christopher Nixon, but that Sir John Batty Tuke and Dr. McVail had obtained the same number of votes for the second seat to be filled by a member belonging to the Branch Council for Scotland. The President next announced that the Penal Cases Committee had been found to be constituted as follows: The President (*ex-officio*), Mr. Bryant, Dr. Windle, Mr. Tomes, Sir Victor Horsley, Dr. Heron Watson, Sir C. Nixon, and Sir W. Thomson, but that Sir John Batty Tuke and Dr. Finlay had obtained the same number of votes for the second seat to be filled by a member of the Branch Council for Scotland.

Sir JOHN TUKE having asked that his name might be withdrawn in favour of Dr. Finlay, the PRESIDENT declared Dr. Finlay elected.

Six o'clock having arrived the election of a second representative for Scotland on the Executive Committee was postponed till Saturday.

The Council adjourned.

SATURDAY, MAY 23RD.

The Council resumed at two o'clock this afternoon, Sir WILLIAM TURNER, the President, being in the chair.

The Executive Committee.

The PRESIDENT called attention to the tie in the voting for a representative of the Scottish Branch on the Executive Committee. At the conclusion of yesterday's business, he said, and when a considerable number of members of the Council were not in the room, it was his duty to state that there had been a tie between Sir John Tuke and Dr. McVail. Dr. McVail was not in the room when he made that statement

Dr. MCVAIL said that he would have great pleasure in giving way to Sir John Tuke, the chairman of the Education Committee, who had rendered great services to the Council in the House of Commons. He considered it an honour to receive an equal number of votes with Sir John Tuke.

The PRESIDENT then declared that Sir John Tuke had been elected the second member of the Scottish Branch on the Executive Committee.

Sir JOHN TUKE thanked his old friend, Dr. McVail, for his great generosity in retiring in his favour.

The Pharmacy Bill.

Sir HUGH BEEVOR asked the President whether his attention had been called to the provisions of the Pharmacy Bill being promoted in the present session by Mr. Lough, M.P., and to the fact that the provisions of the Bill (*inter alia*) penalised any person other than a pharmaceutical chemist from dispensing medical prescriptions in a shop, the Bill containing no definition of the word "shop" and no exemption of registered medical practitioners from its provisions; and, further, whether in view of this, the Council should not take some steps in reference to this or any other Bill promoted on similar lines, to see that the interests of medical practitioners were properly protected.

The PRESIDENT said that he was indebted to Sir Hugh Beevor for sending him a copy of the Bill. He had gone through the Bill and he thought that before he could attempt to give anything like an answer to the question now submitted to him it was necessary that he should look into the Pharmacy Acts which the Bill proposed to amend so that he might see what the differences were between the Bill and those Acts. There were two Acts of Parliament bearing upon pharmaceutical chemists. One was the Act of 1852 which regulated the qualification of pharmaceutical chemists. That Act had only to do with pharmaceutical chemists and medical practitioners were expressly excluded from it. Then there was the Act of 1868 which was an Act to regulate the sale of poisons. The principal enacting clause in that Act was as follows: "It shall be unlawful for any person to sell, or keep open shop for retailing, dispensing, or compounding, poisons, or to assume or use the title chemists or druggists." But subsequent sections of that Act reserved the rights of legally qualified apothecaries, Members of the Royal Colleges, and wholesale dealers in supplying poisons in the ordinary course of dealing. In Section 17 occurred this expression: "Nor shall any of the provisions of this section apply to any poisons supplied by a legally qualified medical practitioner to his patients." But there was a subsequent Act passed in 1869 which set forth that "nothing contained in the first 15 sections of the recited Act of 1868 shall affect any person who has been registered as a legally qualified medical practitioner before the passing of this Act and the said clauses shall not apply to any person who may hereafter be registered as a legally qualified medical practitioner." He thought he might say that these three Acts did guard the interests of the medical profession and the question naturally arose whether in the Bill now before Parliament the interests of the medical profession were still being preserved. He would point out that the Bill was a Bill to alter and to amend the Pharmacy Acts of 1852 and 1868 and the question arose—Would the sections of these Acts to which he had referred still be in active operation or be annulled by the passing of this Bill? That was a legal question and he did not profess to answer it. But there were one or two points in the Bill to which he might refer. The Bill applied to Great Britain—England, Scotland, and Wales—but Ireland was expressly excluded. The definition clause was important: "In this Act 'the Society' shall mean the Pharmaceutical Society of Great Britain; 'registered person' shall mean a pharmaceutical chemist or a chemist and druggist; 'poison' shall mean a poison within the meaning of the Pharmacy Act, 1868; '*registrar' shall mean the registrar of the Society.*" Section 2 of the Bill seemed to him to enlarge very materially the Pharmacy Acts in a very important direction:—"It shall be unlawful for any person or any company, firm, co-partnership, or body of persons, to keep any open shop or shops for the retailing, dispensing, or compounding of poisons or of medical prescriptions unless each shop shall be *bonâ fide* conducted by a registered person." That was a very important provision. The existing Act was for regulating the sale of poisons, but by this Bill not only was the sale of poisons to be regulated but the compounding of medical prescriptions also and the clause went on to say: "or to permit or suffer in such shop any poison to be retailed or any medical prescription to be retailed, dispensed, or compounded otherwise than by, or under the supervision of, a registered person." And a "registered person" was a person registered under this Act or under the Pharmacy Act—namely, a pharmaceutical chemist or a chemist and druggist, not a medical practitioner. That, he submitted, was a very serious inroad on the rights of the medical profession, and, so far as he could see, there was no provision in the Bill to safeguard medical practitioners. The question very materially affected the Society of Apothecaries and he should like to know whether that society was not prepared to get a legal opinion on the Bill. He did not know why the General Medical Council should go to the expense of obtaining a legal opinion in the first instance. He thought it was rather the Society of Apothecaries that should do so.

Sir HUGH BEEVOR said that he had brought the subject before the Council as a matter of public interest. He was not asked to bring it forward by the Apothecaries' Society but he considered that it ought to come before the Council in the interests of the profession.

The PRESIDENT said that there was one branch of the profession which was peculiarly affected—namely, the Society of Apothecaries—and he thought it might help the Council if the Society of Apothecaries were to get a legal opinion as to the exact signification of the Bill and how far the rights of medical practitioners were affected by it.

Sir VICTOR HORSLEY said that the Bill arose out of the report of a departmental committee. The British Medical [illegible] the Bill affected the whole [illegible] it was a very proper matter [illegible]

The PRESIDENT: I am not objecting to the raising of the question here, but I think a legal opinion should first be got by the Society of Apothecaries.

In answer to a question by Dr. HERON WATSON,

Sir JOHN BATTY TUKE said there was not the slightest chance of the Bill passing this session. It had not reached the second reading and if it ever did it could only do so if unopposed, and even if it were unopposed it would have to go to the Standing Committee on Law, which would be sufficiently occupied for the rest of the session with the Deceased Wife's Sister Bill.

Dr. MACALISTER moved:—

> That the President be requested to [illegible] the Lord President [illegible] Council this encroachment ought not to obtain the sanction of Parliament.

Sir HUGH BEEVOR seconded the motion.

[illegible] said that for many [illegible] London had been [illegible] its statutory duty to provide qualified dispensers for medical men, but this had not been done and it had allowed the Pharmaceutical Society to come in and to take its place.

Dr. MACALISTER'S motion was agreed to.

Results of Examinations.

Sir CHARLES BALL moved:—

> That the report of the Examination Committee upon the desirability of obtaining additional information from the various licensing bodies for use in the preparation of the annual table (a) showing results of professional examinations which was received by the Council and entered on the minutes and appears as Appendix XXII. of the volume [illegible] at [illegible] to [illegible]

He said that the annual table gave no information which they could rely on as to the passes and rejections for the simple reason that since 1864, when these returns were first directed to be made annually, the examinations had become so complicated and involved that it was impossible to present the information in a useful form in a table such as that now prepared.

Mr. BRYANT, in seconding the motion, said that the additional information asked for would be very valuable if they could obtain it from the licensing bodies.

The motion was agreed to.

University Representation on the Council.

Mr. JACKSON moved:—

> That the Council petition the Privy Council that, in the event of the Victoria University (Manchester) being divided into two or more separate universities, a single representative should represent the whole collectively.

He thought everyone would agree that the Council was sufficiently large to discharge the duties that were imposed upon it and there were various reasons why the membership should not be increased. Whenever any proposal was made for increasing the number of Direct Representatives it was always alleged as a reason against it that the Council was large enough already, that the accommodation was not sufficient, and that additional members would necessarily lead to increased expense, which was very undesirable in the present financial position of the Council. There was a proposal to divide the Victoria University into two or more separate universities and if that was done each of these bodies might desire to have a representative on the Council. There would be a new university for Liverpool and before very long there might be a fresh university for Yorkshire—in fact, universities seemed to be springing up almost like mushrooms and they might all claim to have a representative on the Council. It was not desirable, he submitted, that every new body which was created should necessarily have a member to itself on the Council. They must be content with a portion of a member; otherwise the members of the Council would be increased to undue proportions.

Mr. BROWN seconded the proposal, remarking that if the university representation was to go on increasing the Council would have to make application to the Government for a considerable increase in the number of Direct Representatives. He did not think the time had arrived when newly created universities should be accredited with a member each on the Council.

The PRESIDENT said there were two matters they had to consider in connexion with the foundation of a university and the granting to that university of representation on the General Medical Council. The charter founded the university, but the Privy Council, which granted the charter, had no power to give the university a representative on the General Medical Council. The General Medical Council was a Parliamentary body; it was constituted by Parliament and to introduce a new member on the Council meant a new Act of Parliament. The Privy Council could not do it; Parliament alone could do it. What was done in the case of the University of Birmingham was to apply to Parliament for an Act. The date of the charter was March 24th and the Act received the Royal assent on May 25th, practically two months subsequent to the charter having received the Royal assent. In discussing this question he wished it to be kept clearly before the minds of members that anything which was done in the way of giving an opinion as to a representative to be appointed under a change in the constitution of Victoria University was to be done through Parliament and not through the Privy Council.

Dr. WINDLE said that none of the new universities would be capable of giving a registrable qualification until they obtained a special Act of Parliament.

The PRESIDENT informed the Council that no Bill had yet been introduced. But if a Bill was introduced, to whom should they present a petition—to the Privy Council or to Parliament?

Dr. MCVAIL considered that the discussion of the matter at this moment was altogether out of order. The General Medical Council had simply to administer certain Acts of Parliament [illegible] Privy Council to the General Medical Council the latter would then be quite entitled to give an opinion, but he held that they had no right whatever to enter into consideration of possible Acts of Parliament.

Sir JOHN BATTY TUKE agreed that it was hardly in order to discuss a Bill that did not exist. Should one be introduced he should move in the House of Commons the rejection of the clause giving a separate representation if there was such a clause in it.

Dr. PYE-SMITH asked the President to rule whether the discussion was really out of order.

The PRESIDENT: This is a matter that affects the Council's constitution and I think we have a perfect right to express our opinion on it. If there was a Bill before Parliament we should have a right to petition about it. We believe that a Bill is ready but it cannot be presented until the charter is signed. The charter is not yet signed. Therefore, my ruling would be that we are right in discussing this matter.

Dr. PYE-SMITH said that in that case he was prepared to move an amendment because he thought the motion did not go far enough. He agreed that the number of members already was inconveniently large and it was a great evil to increase it by giving separate representations to any new universities that might arise, say, in Liverpool, Leeds, Bradford, and Bristol, all of which had been spoken of. He moved—

> That the President be requested on the first opportunity to urge upon the Government the importance of reducing the number of the members of this Council.

Dr. PAYNE seconded and Dr. MACALISTER supported the proposal.

Sir CHRISTOPHER NIXON said that if Dr. Pye-Smith's amendment meant that the number of members should be diminished by a system of grouping the universities so that one person might represent a group of two or three or four he certainly should oppose it because it was not to be expected that the two chief universities of Ireland would be satisfied with less representation on the Council than they had at present. At the same time he would not object to the adoption of a grouping system in respect to new universities.

Dr. WINDLE did not see any reason why at least the three Scotch bodies giving the same registrable qualification should not be grouped under a single representation. He, however, should oppose any plan to disfranchise any, and especially the younger, universities which had power to give a registrable qualification.

Dr. FINLAY intimated that he should vote against the amendment. With respect to grouping, if they combined the universities and licensing bodies of Scotland would they group together, say, the Universities of London and Oxford? Before the Council committed itself it should have before it some very definite scheme of representation.

Dr. NORMAN MOORE thought that if they had a definite scheme before them they could discuss its details, but merely to talk on the abstract question as to whether the Council should be diminished or increased seemed to him to be a waste of time. He did not regard with apprehension an increase of universities; any such increase was sure to do a lot of good to the country and in his view it would be objectionable to deprive new bodies of direct representation.

Sir VICTOR HORSLEY in supporting the amendment said that it crystallised the feeling that this Council was not a representative council at all, so far as the representation of the universities was concerned.

Mr. JACKSON was glad that he had brought forward this matter because it had elicited much of the opinion of the Council. He should be pleased if either the motion or the amendment were passed, but he did not propose to withdraw his proposal in favour of the amendment.

On a division the amendment was rejected by 16 votes to 9.

Dr. MCVAIL wished to move another amendment to the motion, but he objected to go on with it that day because even at the minute he was speaking the Council was sitting beyond the time allowed by the standing orders.

The Council adjourned till Monday.

MONDAY, MAY 25TH.

The Council resumed its sittings to-day, Sir WILLIAM TURNER being in the chair.

Instead of continuing the discussion on Mr. Jackson's motion which was before the Council at its rising on Saturday it was decided to proceed with the penal cases.

The Case of Dr. James Kirkland.

Consideration was first given to the case of James Kirkland of 7, Ladbroke-square, W., registered as M.B., Mast. Surg., 1895, Univ. Glasg., who had been summoned to appear before the Council to answer the following charge, as formulated by the Council's solicitor:—

> That being a registered medical practitioner you have been, and are, a party to the publication of advertisements circulated in pamphlets on social purity purporting to contain advice to young persons, informing the public that the authors of the pamphlets have secured the coöperation of a well-known physician who has for years made the nervous and physical conditions which evil habits bring about a special study and whose charge is moderate, and inviting the public to apply for your address, and to the issue to persons who answered the advertisement of lithographed forms, stating your name, address, and hours of consultation, and that you are the physician recommended in the pamphlets.

Dr. Kirkland appeared, accompanied by his counsel, Mr. William B. Campbell, instructed by Messrs. Edwin Smith and Ellis, solicitors, Bedford-row.

The complainants, the London and Counties Medical Protection Society, Limited, were represented by Dr. H. Woods, their general secretary.

Mr. WINTERBOTHAM, solicitor to the Council, read the charge.

Dr. WOODS, in opening the case, stated that the pamphlets referred to were cheap publications sold at various small shops and particularly at the late Mr. Kensit's place in Paternoster-row. They were unspeakably filthy and there could be no doubt that Dr. Kirkland was the physician referred to in them. The statutory declarations before the Council made it perfectly evident that Mr. Kensit represented that Dr. Kirkland was the person he wanted to recommend, and when patients went to Dr. Kirkland he charged a medical practitioner's fee. Whether authorised by Dr. Kirkland or not, he had been perfectly well aware of the publications; he had taken advantage of them by treating patients who had come to him through them and had made no effort whatever to stop them.

The statutory declarations in support of the charge were held as read.

Mr. CAMPBELL, in defence, said that the charge was that Dr. Kirkland had been guilty of self-advertisement. It came as a surprise to him that Dr. Woods added to the charge that the medium in which the advertisements appeared were objectionable as the pamphlets contained obscene passages. It would have been fairer if he had been previously told of this addition to the charge, but the answer was that Dr. Kirkland was not responsible for these pamphlets, that he never knew of their existence until the present charge was brought, and that he was not the physician referred to in them. Consequently he (Mr. Campbell) was not called upon to defend the Kensit pamphlets. With respect to a pamphlet published for Mr. Henry Varley, which contained an announcement similar to that objected to in the other publications, that publication was strictly proper and Dr. Kirkland would not in the slightest degree deny that he gave his name to Mr. Varley for certain limited purposes only, he being an old friend of Dr. Kirkland's wife. Mr. Varley's book had been published first in 1883—a time at which Dr. Kirkland had not commenced the study of medicine—and it contained the announcement objected to and so Dr. Kirkland could not be the physician referred to. If he was not the physician how was it possible for the three persons who had made statutory declarations to get his name and address? It came about in this way. Mr. Varley was frequently away from town. He asked Dr. Kirkland to let his publisher have his name and address in print and Dr. Kirkland supplied lithographed forms. But to treat that as wholesale self-advertisement would be really trifling with common sense. Dr. Kirkland had not had the slightest idea that these forms were to be used in connexion with any printed pamphlets. How came it that Mr. Kensit, as well as Mr. Varley, recommended Dr. Kirkland? Simply in this way, that when Mr. Kensit published one of the pamphlets which had been named by Dr. Woods he, without Dr. Kirkland's authority, imitated Mr. Varley. Dr. Kirkland had never been warned of what was going on, but so soon as complaint was made he gave not only verbal but written instructions to have all his lithographed forms destroyed. At this moment Dr. Kirkland was willing to give the most distinct undertaking that the thing should not happen again.

Statutory declarations in defence previously lodged with the Council were taken as read.

Dr. KIRKLAND then gave evidence in his own behalf. In answer to Mr. CAMPBELL he stated that he came to practise in London in 1899. He met Mr. Varley, whom he knew to be interested in social purity matters, in September of that year, having to attend him professionally, and it was then for the first time that Mr. Varley broached his wish to have witness as a physician he could recommend. At that time witness did not know anything of Mr. Varley's book and he never authorised Mr. Varley or his publisher to use an advertisement he might have the advantage of. As a matter of fact, when he knew of the book he did not know that the announcement in respect to a physician referred to himself. He had never seen the Kensit pamphlets until the letter of the registrar of the Council reached him and he did not know John Kensit. He had never been in communication with the social purity people in London, and if the announcement in the Kensit pamphlet actually referred to him he did not know it. He certainly knew of the Council's rule as to advertising. He had never advertised. He did not think that the giving of lithographed forms to save other people the trouble of writing his name and address was an infringement of the rule in question. He certainly never agreed that these forms should be given for Mr. Kensit's use. He had ordered the forms and he paid for them. If these forms were in circulation in February it was not to his knowledge, for he had ordered their destruction in October, he thought. He had had no patients through them since October, 1902.

Mr. CAMPBELL: You do sincerely regret that an offence has been committed and you intend not to repeat it?

WITNESS: Certainly.

Dr. MACALISTER: Did you make every effort to get these pamphlets suppressed?

WITNESS: No; I have nothing to do with them; I did not know of their existence until I heard from the Council.

In answer to Dr. MCVAIL, witness said that everything he had done in connexion with the lithographed forms had been done through Mr. Varley, to whom he gave them to circulate to whomsoever he liked. He had prescribed to country patients by letter without seeing them if he thought that it could safely be done.

Mr. ALFRED HOLNESS, publisher of Mr. Varley's book, was next examined. He testified that he got 200 or 300 of the forms in question. Mr. Kensit had come to him and said that he was dissatisfied with the physician he had been recommended, and he asked witness if he would have any objection to send the circular which he indicated that he knew had been prepared for Mr. Varley and witness had replied, "Certainly not." The reason he gave Mr. Kensit for saying so was this, that many of the letters received by him on Mr. Varley's behalf showed him that many young fellows were brought under the influence of quacks and he felt that if they could be brought into contact with a regular practitioner instead it would be advantageous. He had no authority to give away the circulars to Mr. Kensit or on behalf of that gentleman. At the time he complied with Mr. Kensit's request he did not realise the seriousness of the position in which he might be putting Dr. Kirkland in the way in which he had realised it to-day after hearing the evidence. He took all responsibility for the sending out of any of Dr. Kirkland's forms subsequently to October last. Ever since he had been acquainted with the matter—now 20 years or so—Mr. Varley's pamphlet had contained the information that there was a physician whose name and address could be got on application.

Mr. HENRY VARLEY was also called. He confirmed the statutory declaration which he had made and in cross-examination he declared that the paragraph in his book complained of had no distinct reference to Dr. Kirkland whose wife he had known since childhood. In 1902 he knew that Dr. Kirkland was being recommended to applicants who had read his book, but he never mentioned to him that his name was being so used.

The Council deliberated on the case *in camerâ*. On the readmission of the public,

The PRESIDENT, addressing Dr. Kirkland, said: The Council understands that counsel, acting on your behalf, has given the undertaking that you will come under the obligation to cease this conduct in connexion with the charge made against you. Will you state that that is so?

Dr. KIRKLAND: Yes, sir.

The PRESIDENT: Then I have to communicate to you the following resolution:—

> 1. The facts alleged against you in the notice of inquiry have been proved to the satisfaction of the Council. 2. Seeing, however, that you have expressed your regret that you have committed what the Council regards as a grave professional offence and that you have promised to abstain from any conduct affording similar ground of complaint for the future the Council has resolved not to proceed any further in reference to the facts proved against you.

The Case of Mr. Edward John Smith.

The Council proceeded to the consideration, adjourned from Nov. 26th, 1902, of the facts proved against Edward John Smith of 110, Balsall Heath-road, Birmingham, registered as Lic. Soc. Apoth. Lond., 1883, Mem. R. Coll. Surg. Eng., 1885, who had been summoned to appear before the Council to answer the following charge, as formulated by the Council's solicitor:—

> That you have been guilty of infamous conduct in a professional respect, the particulars of which are as follows: That you, being a registered medical practitioner, systematically seek to attract practice by a system of extensive public advertisements containing your name, address, and qualifications, and invitations to persons in need [illegible] advertisements so [illegible] of a character dis- [illegible]

[illegible] ncil on this case on [illegible] uncil addressed Mr. [illegible] very carefully on [illegible] t the facts alleged [illegible] en proved to the [illegible] u this decision the [illegible] a serious view of [illegible]

Mr. Smith attended in answer to the summons.

Dr. Bateman appeared on behalf of the Medical Defence Union, the complainants.

Mr. WINTERBOTHAM having read the notice to attend, Dr. BATEMAN stated that he had no further evidence to offer against Mr. Smith and that he was perfectly satisfied as to his conduct in the interval since last session.

Mr. SMITH, in answer to the PRESIDENT, stated that he had discontinued the practice complained of and he undertook not to repeat it in the future.

After a short deliberation in private,

The PRESIDENT, addressing Mr. Smith, said: Mr. Smith, the Council has deliberated on your case and relying on your statement and promise has resolved:—

> That the Council, having further considered the facts proved against you, does not judge you guilty of infamous conduct in a professional respect.

Mr. SMITH: I should like to address a few words to you.

The PRESIDENT: No, no. We cannot hear you; your case is closed.

Amendment of Medical Acts.

Mr. TOMES asked a question in regard to the terms of General Laurie's Bill to amend the Medical Acts, to which the President had alluded in his address.

The Registrar was directed to procure copies of the Bill for the information of the Council.

The English Conjoint Board's Examinations.

Sir VICTOR HORSLEY asked a question as to the progress made by the Examination Committee in the preparation of the report on the visitation and inspection of the primary examinations of the English Conjoint Board.

As Mr. Bryant was absent other members of the committee stated in reply that the chairman of the committee had promised to prepare a draft report for the consideration of the committee on Wednesday, May 27th.

The Council adjourned.

TUESDAY, MAY 26TH.

The Council continued its sittings to-day, Sir WILLIAM TURNER again presiding.

The Case of Dr. J. Dugald Maclean.

Consideration was given to the case of James Dogald Maclean, of 72, Summer-hill-road, Birmingham, registered with the triple qualification of Scotland, 1893, and M.B. Mast. Surg., 1893, Univ. Edin., who had been summoned to appear before the Council to answer the following charge, as formulated by the Council's solicitor:—

> [illegible]

Dr. MACLEAN appeared, being accompanied by Dr. WOODS, secretary of the London and Counties Medical Protection Society, Limited.

Mr. WINTERBOTHAM stated that the complaint had originated with a public board—the Birmingham School Board.

The PRESIDENT asked Dr. Maclean if he was represented.

Hospital, Dental Department; Theodore James Gayton Fielder, William Douglas Frew, Leonard Anderson Glaisby, Duncan Henry Grubb, Arthur John Haddock, and Samuel Hallam, Royal Dental Hospital, London; Arthur William Gant, Arthur Tidswell Hanson, and Sidney Harlock, Victoria Dental Hospital, Manchester; Arthur Hammond-Smith, William Alfred Helyar, and Percy Harold Hickman, and Frank Alfred Husbands, Guy's Hospital, Dental Department; Wilfrid Harvey, National Dental Hospital; John Garnet Hemsted, Frank William Herbert, Albert Oliver Macarius Heslop, and Herbert Henning James, Royal Dental Hospital, London; John Joseph Horton, and John Robertson Knott, Dental Hospital, Birmingham; Arthur George Lacey, Royal Dental Hospital, London; George Edward McMahon, Dental Hospital Liverpool; Philip Edwin Luce, James William Mawer, Norman McLeod Nibbs, Herbert Arnold Pallant, Henry Maurice Peacock, Henry Garfield Pearce, Edward Laurence Pilbeam, and Herbert Poyton, Guy's Hospital Dental Department; William Charles Augustus Ovey, Albert Pfeiffer, Charles Read, and George Theodore Robinson, Royal Dental Hospital, London; Harold Ridges Rowe, National Dental Hospital; Ronald Maclean Rowstron, Newcastle-on-Tyne Dental Department, Durham; Harold John Russell and John Francis Ryder, Guy's Hospital, Dental Department; Christopher John Storey, National Dental Hospital; Harold Foster Strickland, George Frederick Taylor, Frank Throp, William Collingwood Tuck, Royal Dental Hospital, London; Frederick Vosper, National Dental Hospital; James Herbert Williams and William John Wormald, Guy's Hospital, Dental Department; Francis Raymond Wilson, National Dental Hospital; and Aubrey Geer Wootton, Royal Dental Hospital, London.

Mechanical Dentistry.—William Bowater, Dental Hospital, Birmingham; Lionel Curtis, Edmund Aloysius Emery, Royal Dental Hospital, London; James Hargreaves, Victoria Dental Hospital, Manchester; Sidney Herbert Hole, Royal Dental Hospital, London; Edward Henry Hollick, Dental Hospital, Birmingham; William John Jones, Royal Infirmary and General Hospital, Dental Department, Bristol; Herbert Frank Marshall, Dental Hospital, Birmingham; Arthur Miller, Royal Dental Hospital, London; George Holmes Smith, Royal Infirmary and General Hospital, Dental Department, Bristol; Herbert John Snowdon, Guy's Hospital Dental Department; Harold Thomson, Victoria Dental Hospital, Manchester; Ingram Ernest Watson and Henry John Trude, Royal Dental Hospital, London; and Reginald Cecil Webster and John William, Dental Hospital, Liverpool.

Dental Metallurgy.—William Edmund Cook, Guy's Hospital, Dental Department; Richard Halford Winterly Crouch, Dental Hospital, Birmingham; Montague N. Goodman, Royal Dental Hospital, London; Samuel Isaacs, Victoria Hospital, Manchester; John Jackson Law, Royal Dental Hospital, London; and Hedley Hargreaves Taylor, Victoria Dental Hospital, Manchester.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the subjects indicated :—

Surgery.—E. F. Beaumont (Section II.), Middlesex Hospital; W. H. Crossley, St. Bartholomew's Hospital; N. S. Finzi (Sections I. and II.), University College Hospital; E. Gray, London Hospital; W. P. Jones (Section I.), Sheffield; W. S. Lewis (Section II.), Birmingham; and W. Martin (Sections I. and II.), St. George's Hospital.

Medicine.—D. Cotes-Preedy (Sections I. and II.), Cambridge and St. George's Hospital; E. H. Drinkwater (Section I.), Liverpool and St. Bartholomew's Hospital; H. J. Gater (Sections I. and II.), Guy's Hospital; and L. C. A. Savatard (Sections I. and II.), Manchester.

Forensic Medicine.—D. Cotes-Preedy, Cambridge and St. George's Hospital; E. H. Drinkwater, Liverpool and St. Bartholomew's Hospital; and J. M. King, University College Hospital.

Midwifery.—A. J. Ambrose, Westminster Hospital; C. C. Bernard, Royal Free Hospital; R. H. Cooper, Charing Cross Hospital; F. F. L. How, University College Hospital; J. E. Jones, Bristol; P. J. Pagonis, Athens; H. A. Parker, St. Thomas's Hospital; N. O. Roberts, Cambridge and St. Mary's Hospital; and J. W. Watson, Manchester.

The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery :—E. F. Beaumont, D. Cotes-Preedy, W. H. Crossley, E. Gray, and W. Martin.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—FELLOWSHIP EXAMINATION.—The following candidates having passed the necessary examination have been admitted Fellows of the College :—

C. Cooper, Miss A. N. V. Johnson, R. P. M'Donnell, R. F. C. Talbot, and J. Trumbull.

The following have passed the primary part of the examination :—

I. Allaun, R. F. Hayes, T. J. Brooke-Kelly, and P. D. Sullivan.

TRINITY COLLEGE, DUBLIN.—At examinations held at Trinity term the following candidates were successful :—

Final Examination in Surgery.—William G. Harvey, William R. P. M'Neight, Robert J. Fleming, Reginald H. Lee, John M. Holmes, Henry O'H. May, Alexander L. Otway, John H. Askins, Douglas B. Thomson, David C. Pearson, Reginald W. T. Clampett, Alexander H. Marks, Samuel H. Vickery, Harry R. Nelson, Augustus B. Tighe, and Bertram L. Middleton.

FOREIGN UNIVERSITY INTELLIGENCE — *Gratz:* Dr. Lorenz of Vienna has been appointed to the chair of Clinical Medicine.—Dr. Knauer of Vienna has been offered the chair of Gynæcology in succession to Dr. Rosthorn who goes to Heidelberg.—*Iurieff (Dorpat):* Dr. Savelieff, Extraordinary Professor of Medicine, has been promoted to the full professorship.—*Jena:* Dr. Bernhard Krönig of Leipsic has been appointed to the chair of Midwifery and Gynæcology in succession to Dr. Schultze, resigned.—*St. Petersburg (Military Medico-Chirurgical Academy):* Dr. V. Orlovski has been recognised as *privat-docent* of Medicine and Dr. Hagen-Torn as *privat-docent* of Surgery.—*Vienna:* It is now announced that Professor Flügge has declined the offer of the chair of Hygiene.

ROYAL MEDICAL BENEVOLENT COLLEGE.—At the annual general meeting held on May 29th at the office of the College in Soho-square, London, W., the following candidates for pensionerships and foundation scholarships were declared to have been duly elected :—

To Pensionerships.—Frances Newsam (Pugh Pensioner), Elizabeth M. Smith, Harriett C. Addison, Margaret A. Mayhew, and Catherine A. Cringle.

To Foundation Scholarships.—Roy G. Shapley, Eric S. Monro, Edward Cooke, Arthur W. Barr, John A. Caw, James L. Taylor, Sydney D. Newton, and John A. R. Campbell.

UNIVERSITY OF LONDON: FACULTY OF MEDICINE.—A meeting of the Faculty of Medicine was held at the University on May 22nd. Mr. H. T. Butlin, the Dean of the Faculty, was in the chair and 40 members were present. The Faculty had under its consideration a proposal by the board of studies in dentistry to institute a special degree in that subject. Two schemes for a curriculum and examinations were submitted. The scheme recommended by the majority of the board required that all candidates for a dental degree should previously have obtained the degrees of M.B., B.S. of the University. The minority scheme required all candidates to have passed the intermediate (M.B.) examination of the University before submitting to the special examination. Full details of each scheme were circulated before the meeting, together with a copy of a petition from the Royal Dental Hospital and National Dental Hospital to the University of London Statutory Commissioners praying that a degree in dentistry should be established. It was moved by Mr. Badcock and seconded by Dr. Lauriston Shaw "That it is desirable that the University of London should institute a degree in dentistry." As an amendment it was moved by Mr. Morton A. Smale and seconded by Mr. W. A. Maggs, "That after consideration of the report of the board of studies in dentistry the Faculty of Medicine is of opinion that it is not desirable at present to establish special degrees in special departments of medicine and surgery." The amendment was carried by 16 votes to 13 and was subsequently adopted as a substantive motion.

THE LEAGUE OF MERCY.—On May 22nd the Prince and Princess of Wales entertained a number of presidents, vice-presidents, and members of the League of Mercy at Marlborough House, when an investiture of the order took place. According to the charter under which the League of Mercy was founded in 1899 its object is to further the interests and to promote the adequate maintenance of hospitals and other institutions for the relief of sickness and suffering, and this was to be done especially by encouraging personal service on the part of large numbers of persons. The League of Mercy has, in the four years during which it has been in operation, contributed £22,000 to King Edward's Hospital Fund, and this part of its work appears to be now established on a firm basis with progressively increasing results. Moreover, the additional £100,000 or £150,000 per annum which the King's Fund was initiated to secure for the hospitals seems to be within measurable distance of being attained. Suggestions have from time to time been made to the effect that it would be fully in accord with the objects and name of the League of Mercy if those who are willing and able to render personal aid to the inmates of hospitals and kindred institutions could be brought together and coördinated under its supervision. In other words it is proposed to establish a "Samaritan Wing" or department of the League of Mercy. The proposal, if found practicable, has the sanction of the Grand Presidents their Royal Highnesses the Prince and Princess of Wales and the approval of His Majesty the King. The work of the league is carried on by a network of branches spread over London and the home counties. Nearly every Parliamentary division within this area has its branch of the league, but even yet the organisation of its machinery is not completed. Nearly every one of the 100 districts into which London and the home counties have been divided now has its branch of the league at work Among those who were awarded the Order of the League were the following medical men Dr Clement Godson, Mr Norman Hay Forbes, Mr T F McDonnell, and Mr H Wright

EXMOUTH HOSPITAL —At a three days' bazaar which has just been held at Exmouth over £1000 were raised towards the building fund of the Exmouth Hospital

DONATIONS AND BEQUESTS —By the will of Mr William H Cope University College Hospital, London, will receive £100

MEDICAL MAGISTRATE —Dr Thomas Sheldon has been placed, on the nomination of the Lord Lieutenant, upon the commission of the peace for the county of London

REMUNERATION FOR EXTRA SERVICES —The Bristol board of guardians on May 22nd awarded 20 guineas to Mr R H Norgate, the resident medical officer of the Stapleton workhouse, in recognition of his services in attending patients at the Broom Hill Fever Hospital

LITERARY INTELLIGENCE — Messrs Baillière, Tindall, and Cox announce that they will this week issue a new volume in their University Series—viz, "A Manual of Medicine," by Professor T Kirkpatrick Monro In addition to the foregoing they announce a monograph on "The Imperfectly Descended Testis," by Mr W McAdam Eccles, and a new work by Mr J Jackson Clarke on "Protozoa and Disease"

OPENING OF KEW BRIDGE —Mr. Joseph Smith, M.R.C.S Eng, chairman of the Chiswick urban district council and late honorary surgeon of the Royal Surrey County Hospital, had the honour of being presented to their Majesties the King and the Queen on the occasion of the opening of Kew Bridge on May 20th Mr Smith at the same time presented to the King on behalf of the inhabitants of Brentford and Chiswick a silver tankard, a magnificent specimen of the jeweller's art, dated 1721 His Majesty graciously accepted it and expressed himself much pleased with the gift

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST —The festival dinner of this hospital was held under the chairmanship of Alderman and Sheriff Sir George Wyatt Truscott at the Stationers' Hall, Ludgate hill, London, on May 20th In the course of replying to the toast of "The Medical Staff" Dr G A. Heron referred to the congress for discussing the means by which the spread of consumption may be prevented which is proposed to be held in Paris in October, 1904 A report would be made to that congress of what was being done in various countries by the working men's societies to assist in preventing the spread of that disease A request had been received by the authorities of the City of London Hospital asking that the English working men's friendly societies should supply [illegible] which they are taking [illegible] with a view to the facts [illegible] submitted to the congress [illegible] ble that the information required from the English working men's friendly societies should be supplied before the end of 1903 The chairman in proposing "Prosperity to the City of London Hospital for Diseases of the Chest," made an eloquent appeal for funds in aid of the institution He pointed out that the hospital was situated in a most densely populated area of the metropolis and explained what a terrible and dangerous thing it was to have a patient suffering from consumption living in a crowded and ill ventilated home He suggested that a very practi[illegible] free th[illegible] man's [illegible] ing to about £2000, a gratifying result which was received with much cheering Sir Edmund Hay Currie then proposed the toast of "The Committee and Executive Staff" and spoke of the admirable manner in which the administration of the hospital was carried on This toast was replied to by Sir Edward Sassoon, M P, treasurer and chairman of the hospital committee A long list of other toasts followed and it was not until a late hour that the company separated

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS

IT is understood that on Friday, June 26th, the Earl of MEATH intends to draw the attention of the Government to the report of the Royal Commission on Physical Training in Scotland and to the report of the Inspector General of Recruiting for 1902 in the latter of which it is stated that the one subject which causes anxiety in the future as regards recruiting is the gradual deterioration of the physique of the working classes from which the bulk of the recruits must always be drawn He will also ask the Government what steps it proposes to take in order to arrest this physical deterioration "which varied and undoubted evidence shows to be gradually taking place amongst the poorer portions of the populations of the large cities of Great Britain and which if allowed to continue unchecked threatens the State with grave national peril"

HOUSE OF COMMONS

THURSDAY, MAY 21ST

Report on Enteric Fever and Dysentery

Dr Farquharson asked the Secretary of St[illegible]

Vivisection at University College

SIR FREDERICK BANBURY asked the Secretary of State for the Home Department what was the nat[illegible] graphs of the question I have already in previous answers given fully the main facts of the case As to the two last paragraphs Professor E H Starling performed the experiment referred to under Certificates B and E L

Leprosy in Ceylon

Mr SCHWANN asked the Secretary of State for the Colonies whether, in view of the prevalence of leprosy in Ceylon and of the fact that the ordinances recently passed by the Legislative Council provided for the compulsory segregation of lepers in Ceylon he would state what was the number of leper hospitals in Ceylon and how many leper patients [illegible], and whether he would consider the [illegible] for these people by the erection of [illegible] districts with a view to enable the [illegible] properly carried out if the present [illegible] —Mr CHAMBERLAIN replied There are two leper hospitals in Ceylon and 312 leper patients can be accommodated in them The leper ordinances do not require that lepers who can be otherwise properly isolated should be removed to a hospital and I am not aware that the hospital accommodation is insufficient but I will consult the Governor on the subject

MONDAY MAY 25TH

The Infected War Blankets

[illegible] May 4th

Sir THOMAS DEWAR asked the Secretary of State for War whether he [illegible] to is probably 30 000 of the same consignment in a warehouse in Assam street Whitechapel as they were found to contain the enteric fever bacilli in large numbers; and that the blanke[illegible] in both [illegible] as to disinfection in every case of infectious disease. I also issued special orders to South Africa two years ago neither to sell nor to send home any textile fabrics which might convey infection. I have caused the general officer commanding to investigate and to report fully on the matter and to take steps to have any condemned blankets still remaining in South Africa destroyed.

Nottingham Small-pox Hospital.

Mr. JOHN ELLIS asked the President of the Local Government Board whether his attention had been called to the erection by the corporation of Nottingham of a small pox hospital on the extreme northern boundary of its area in close proximity to a road along which numbers of persons were daily passing and to a number of dwelling-houses and a growing population; and whether he could take any steps in the matter for the protection of the public outside Nottingham.—Mr. LONG replied: The Nottingham Town Council has erected a small-pox hospital on a site which it considers the most suitable that could have been selected within the borough. I am informed that the neighbourhood is the most sparsely inhabited part of the borough, that there is no considerable population within a radius of two miles of the site, and that within this radius there are only a few scattered houses and the Bestwood colliery and ironworks, the latter being half a mile from the hospital. The town clerk informs me that the road referred to in the question is used almost solely by men working at the colliery and ironworks most of whom drive in breaks when going to and from work and have no need to pass at any other time. He adds that there is no evidence of any increase, or likelihood of increase, in the building operations in the neighbourhood. The town council has not applied to me for sanction to a loan in connexion with the hospital and I have no jurisdiction in the matter. I should gather that the conditions which the Local Government Board requires in the case of hospitals provided by means of loans sanctioned by it have been complied with, but I will make further inquiry as to this.

Medical Services in the Highlands.

Mr. CATHCART WASON asked the Lord Advocate if the committee of the Scottish Local Government Board which had been making inquiry into the subject of Poor law medical relief had also inquired into the grievances of the parochial medical officers in the highlands and islands of Scotland, and, if so, whether he would state what steps the Government proposed to take in the matter.—The LORD ADVOCATE replied: The *committee in question is a departmental one to inquire into and report* on the methods and conditions under which Poor-law medical relief is [illegible] Scotland an [illegible]. it is [illegible] thereto, [illegible] stri- [illegible] rom the l [illegible] cost of Poor-law medical relief and trained [illegible] and regulations for the management of poorhouses; and it is only incidentally, therefore, that the subject of the honourable Member's question can come within the terms of reference. In any case the committee not having reported it is not possible as yet to say what steps it may be the duty of the Government to take in the matter.

TUESDAY, MAY 26TH.

Plague at Hong-Kong.

Mr. WEIR asked the Secretary of State for the Colonies whether he was aware that 117 cases of plague resulting in 99 deaths were reported to have occurred at Hong-Kong in one week during the present month; and whether he would state when he proposed to lay upon the table of the House the reports of the medical and sanitary experts, Dr. W. J. R. Simpson and Mr. Robert Chadwick, who visited Hong-Kong last year in connexion with the plague.—Mr. CHAMBERLAIN replied: I am aware of the facts quoted by the hon. Member, which were reported to me by the governor in a telegram which was communicated to the press. I do not propose to lay the reports referred to on the table, but I have caused copies to be placed in the library.

BOOKS, ETC., RECEIVED.

ASSELIN ET HOUZEAU, Place de l'École-de-Médecine, Paris.

Les Déséquilibrés du Système Nerveux. Étude Clinique et Thérapeutique. Par le Dr. A. Raffray, Ancien Interne des Hôpitaux de Paris. Préface du Dr. H. Barth, Médecin de l'Hôpital Necker. Price not stated.

BAILLIÈRE, TINDALL AND COX, 8, Henrietta-street, Covent-garden, W.C.

The Imperfectly Descended Testis: Its Anatomy, Physiology, and Pathology. By W. McAdam Eccles, M.S. Lond., F.R.C.S. Eng., Assistant Surgeon to, and Demonstrator of Operative Surgery at, St. Bartholomew's Hospital. Price 7*s.* 6*d.* net.

Muco-membranous Colitis. By Dr. Froussard, Ancien Interne des Hôpitaux de Paris; Physician at Plombières-les-Bains. Price 1*s.* net.

BALE (JOHN) SONS, AND DANIELSSON, LIMITED, 83–89, Great Titchfield-street, W.

Squint: its Causes, Pathology, and Treatment. By Claud Worth, F.R.C.S. Price 6*s.* net.

Observations on the Sensibility of the Abdominal Cavity. By K. G. Lennander, F.R.C.S. Eng., Professor of Surgery in Upsala, Sweden. Translated by Arthur E. Barker, F.R.C.S., Professor of Surgery at University College, London. Price 3*s.* net.

BRAUMÜLLER, WILHELM, Wien und Leipzig.

Die Vererbung der Syphilis. Ist eine paterne Vererbung erwiesen? Von Dozenten Dr. Rudolf Matzenauer. Price not stated.

Die Vererbung der Syphilis. Von Dozent Dr. Rudolf Matzenauer. Ergänzungsheft zum "Archiv für Dermatologie u. Syphilis." Price not stated.

HIRSCHWALD, AUGUST, Unter den Linden, 68, Berlin, N.W.

Körperubungen und Alkol [illegible] Hueppe. Vortrag gehalten in der [illegible] Internationalen Congresses gegen [illegible] 1903, in Bremen. Price 60 pf.

LONGMANS, GREEN AND CO., 39, Paternoster-row, E.C.

Alpine Flora. For Tourists and Amateur Botanists. By Dr. Julius Hoffmann. Translated by E. S. Barton (Mrs. A. Gepp). Price 7*s* 6*d.* net.

The Royal University of Ireland Calendar for the Year 1903. Price not stated.

Hampshire Days. By W. H. Hudson, Author of "Birds and Man," "Nature in Downland," &c. Price 10*s.* 6*d.* net.

A Manual of Surgical Treatment. By W. Watson Cheyne, C.B., M.B., F.R.C.S., F.R.S., Professor of Clinical Surgery in King's College, London, and [illegible] Teacher of Operative [illegible] parts. Part VI. Sec [illegible] Affections of the Rectum, the Liver, Pancreas and Spleen, the Genito-Urinary Organs, the Breast and the Thorax. Price 21*s.*

MALOINE, A., 2–325, Rue de l'Ecole-de-Médecine, Paris.

Préci [illegible] Tube Digestif d'après la Méthode de [illegible] Chaillou, Médecin attaché au Ser [illegible] Pasteur, et Léon MacAuliffe, Secrétaire de la Société française d'Histoire de la Médecine. Price not stated

MERCK, E., Darmstadt (16, Jewry-street, London, E.C.)

Report on the Advancements of Pharmaceutical Chemistry and Therapeutics. Complete series. Volume XVI. 1902. Price not stated.

MURRAY, JOHN, Albemarle-street, W.

Handbook of Physiology. By W. D. Halliburton, M.D., F.R.S., Professor of Physiology, King's College, London. Fifth edition. [illegible] edition of Kirkes' Physiology.) Price 14*s.*

[illegible] he Tropical Nile. By Captain C. A. Sykes, [illegible] t.

OFFICE OF THE SUPERINTENDENT OF GOVERNMENT PRINTING, Calcutta.

Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. Some Observations on the Poison of Russell's Viper (Daboia Russellii). By G. Lamb, M.D., Captain, I.M.S., and Wm. Hanna, Esq., M.B., &c. New Series. No. 3. Issued under the authority of the Government of India by the Sanitary Commissioner with the Government of India, Simla. Price As.5 or 6*d.*

REDMAN, LIMITED, 129, Shaftesbury-avenue, Cambridge-circus, W.C.

A Manual of Plague. By William Ernest Jennings, M.B., C.M., Major in the Indian Medical Service; Chief Medical Officer for Plague Operations in the Bombay Presidency. With an Introduction by Surgeon-General G. Bainbridge, M.D, M.R.C.P., I.M.S. Price 8*s.* net.

SAUNDERS, W. B., AND CO., Philadelphia, New York, and London.

Diseases of the Liver, Pancreas, and Suprarenal Capsules. By Leopold Osler, M.D., of Vienna; Edmund Neusser, M.D., of Vienna; Henry Quincke, M.D., of Kiel; and G. Hoppe Seyler, M.D., of Kiel. Edited, with additions, by Reginald H. Fitz, M.D., of Harvard University, and Frederick A. Packard, M.D., of Philadelphia. (Nothnagel's Encyclopædia of Practical Medicine. English edition.). Price, cloth, 21*s.* net.

Diseases of the Stomach. By Franz Riegel, Professor of Clinical Medicine in the University of Giessen. Edited, with additions, by Charles G. Stockton, M.D., Professor of Medicine in the University of Buffalo. Price, cloth, 21*s.* net. (Nothnagel's Encyclopædia of Practical Medicine.)

A Text-book of Legal Medicine and Toxicology. *Edited by* Frederick Peterson, M.D., President of the New York State Commission in Lunacy, and Walter S. Haines, M.D., Professor of Chemistry, Pharmacy, and Toxicology in Rush Medical College, Chicago. In two volumes. Volume I. Price 21*s.* net.

Tuberculosis. Recast from Lectures delivered at Rush Medical College, in Affiliation with the University of Chicago. By Norman Bridge, A.M., M.D., Emeritus Professor of Medicine in Rush Medical College. Price 6*s.* net.

SCIENTIFIC PRESS, LIMITED, 28 and 29, Southampton-street, Strand, W.C.

Burdett's Hospitals and Charities, 1903. By Sir Henry Burdett, K.C.B. Price 5*s.* net.

SOCIETY FOR PROMOTING CHRISTIAN KNOWLEDGE, London.

"Christian Science" Contrasted with Christian Faith, and with Itself. By William Lefroy, D.D., Dean of Norwich. Price 2s. 6d.

STEINHEIL, G., 2, Rue Casimir-Delavigne, Paris.

Contribution à l'Etude du Testicule dans Quelques Infections Orchites Expérimentales. Par le Dr. Charles Esmonet, Ancien Interne des Hôpitaux. (Travail du Laboratoire de M. le Professeur agrégé H. Roger.) Price not stated.

Travaux de Chirurgie Anatomo-clinique. Par Henri Hartmann, Professeur agrégé à la Faculté de Médecine Chirurgien de l'Hôpital Lariboisière. Voies Urinaires. Estomac. Price 15 francs.

UNIVERSITY PRESS, Cambridge. (**C. J. CLAY AND SONS**, Ave Maria-lane, London.)

The Geography of Disease. By Frank G. Clemow, M.D. Edin., D.P.H. Camb., British Delegate to the Ottoman Board of Health, Physician to H.M Embassy at Constantinople. (Cambridge Geographical Series, General Editor, F. H. H. Guillemard, M.D.) Price 15*s.*

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BOWKER, CEDRIC V., M.B., Ch.M. Syd., has been appointed *temporarily* as second Government Medical Officer, New South Wales, Australia, for six months.

CANN, T. P., M.D. Durh., *has been appointed Certifying Surgeon* under the Factory Act for the Newhaven District of the county of Sussex.

Co[illegible] F.R.C.S.I., has been [illegible] Act for the Naas [illegible]

Co[illegible] been appointed [illegible]

Cr[illegible] rtifying Surgeon [illegible] of the county of [illegible]

CUSCADEN, GEORGE, L.R.C.P. & S. Edin., has been appointed Honorary Surgeon to Out-patients, Women's Hospital, Melbourne, Victoria, Australia.

FAIRCLOUGH, T. B., M.D., M.S. Irel., has been appointed Certifying Surgeon under the Factory Act for the Dewsbury District of the [illegible] York.

[illegible] L.R.C.P. Lond., has been appointed [illegible] o St. Mary Islington Infirmary.

GREIG, JANET, M.B., Ch.B. Melb., has been appointed Honorary Assistant Anæsthetist to the Melbourne Hospital, Victoria, Australia.

HEARY, E. M. W., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Superintendent of the Bolingbroke Hospital.

HENRY, JOHN P., M.D., B.Ch. Dub., has been re-appointed Oculist to [illegible]

[illegible] been appointed Certifying Surgeon [illegible] Falkland District of the county of [illegible]

[illegible] has been appointed Consulting Dental [illegible]

[illegible] been appointed [illegible] r the Ferbane [illegible]

[illegible] nted Certifying [illegible] Foldhouse District of the [illegible]

[illegible] S.A. Lond., has been [illegible] and *Chedzoy district* [illegible]

[illegible] een appointed Certify- [illegible] Beaumaris District of [illegible]

[illegible] to [illegible]

[illegible] on [illegible] of [illegible] Northampton [illegible]

[illegible] *Eng., has been* [illegible] Mineral Water Hospital, vice Mr. J. W. Mann, resigned.

WORBOYS, T. S., L.R.C.P. Lond., M.R.C.S., has been appointed Certifying Surgeon under the Factory Act for the Winterton District of the county of Lincoln.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BATH, ROYAL UNITED HOSPITAL.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

BECKETT HOSPITAL, Barnsley, Yorkshire.—Resident House Surgeon. *Salary £100, with board, lodging, and washing.*

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY [illegible] Birmingham.—Clinical Assistant. [illegible]

CEN[illegible] n-road, W.C.— [illegible] with board and residence.

CHARING CROSS HOSPITAL.—Assistant Physician.

CHICHESTER INFIRMARY.—Honorary Medical Officer. Also Surgeon Dentist.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Resident Medical Officer. Salary £100 per annum, with board, residence, and washing.

EAST SUSSEX COUNTY ASYLUM, Hellingly.—Second Assistant Medical Officer, unmarried. Salary £200 a year, with board, lodging, washing, and attendance.

GRAVESEND HOSPITAL.—House Surgeon. Salary £100 per annum, with board and residence.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway, N.—Senior House Surgeon, Senior House Physician and two Junior House Surgeons, each for six months. Salary of Seniors at rate of £80 per annum, of Juniors at £30 per annum, with board, lodging, and washing.

HARRIS, PARISH OF.—Medical Officer and Public Vaccinator. Salary £110.

AYDOCK LODGE ASYLUM, Lancashire.—Assistant Medical Officer, unmarried. Salary £200 a year, with quarters, board, washing, &c.

HOLLOWAY SANATORIUM HOSPITAL FOR THE INSANE, Virginia Water, Surrey.—Junior Assistant Medical Officer. Salary £175 per annum, [illegible]

HOSPITAL FOR WOMEN, [illegible] W.—House Physician for six mon[illegible] so Assistant Physician.

INDIAN [illegible] ndon, S.W.—Examination for [illegible] in His Majesty's Indian Medical Service.

KETTERING AND DISTRICT GENERAL HOSPITAL.—*House Surgeon, un*married. Salary £75 per annum, with apartments, board, and laundry.

LANCASHI[illegible] Medic[illegible] £350, [illegible]

LIVERPOO[illegible] per an[illegible]

MANCHES[illegible] Salary £80 per annum.

MIDDLESEX HOSPITAL, W.—Director of the Cancer Research Laboratories. Salary £500 per annum, rising to £800. Also Cancer *Research Scholarship, value £105.*

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Assistant House Surgeon. Salary £50 per annum, with board, residence, and washing.

NORFOLK AND NORWICH HOSPITAL.—House Physician, unmarried. Salary £80 per annum, with board, lodging, and washing.

NORTH DEVON INFIRMARY, Barnstaple, Devon.—House Surgeon. Salary £80 per annum, with board, residence, and washing.

NORTH EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—House Surgeon for six months. Salary at rate of £80 per annum [illegible]

ROYAL ALBER[illegible] *married.*

ROYAL DENT[illegible] Honorarium £50 per annum.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, S.E.—Resident Medical Officer. Salary at rate of £70 per annum.

[illegible] residence.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon for six months, renewable. Salary at rate of £50 per annum, with board and residence.

SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon, [illegible] for six months, renewable. Salary at rate of £70 per [illegible]

WE[illegible] N.W.—Honorary [illegible]

WE[illegible] t Junior House [illegible] lodging, washing, and attendance.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician and House Surgeon, both for six months. Board and lodging provided.

Births, Marriages, and Deaths.

BIRTHS.

CHANNER.—On May 12th, at Park-hill, Ealing, W., the wife of [illegible] Channer, I.M.S., of a son.

[illegible] 63, Sackville-road, Hove, the wife [illegible] M. Cantab., of a daughter.

[illegible] roke-grove, W., the wife of C. E. [illegible] of a son.

MARRIAGES.

GRIMWADE—TANNER.—On 30th March, at St. Mary's, Caulfield, Victoria, by the Rev. A. H. J. Priest, assisted by the Rev. Canon Sutton, Alfred Sheppard Grimwade, M.R.C.S. Eng., L.R.C.P. Lond., third son of the Hon. F. S. Grimwade, Harleston, Caulfield, to Amy Gertrude, second daughter of Thomas Tanner, Esq., Old Trafford, Manchester, England.

MILLS—MACDOUGALL.—At 42, Millbrae-road, Langside, Glasgow, on the 21st inst., by the Rev. D. Georgeson, U.F. Church, Bowling, assisted by Rev. D. Taylor, U.F. Church, West Calder, Robert J. Mills, M.B., Ch.B. Glasg., Hirst, Morpeth, to Barbara Chisholm (Cissy), *eldest daughter of the late Wm. Macdougall, Charing* Cross, Glasgow.

RICE—SHENTON.—On April 18th, at Perth, West Australia, Hubert Richard Rice, M.R.C.S., L.R.C.P. Lond., to Florence Julia, third daughter of Sir George Shenton, President of the Legislative Council of West Australia, Crawley Park, Perth.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

CAN A VARICOCELE BE CAUSED BY A STRAIN?

To the Editors of THE LANCET.

SIRS,—During the last few weeks I have had two cases of the above complaint following the lifting of heavy weights and slipping of the foot. In the first case (a boy aged 14) nothing ailed the patient before the accident, on the occurrence of which he was obliged to leave his work in the pit owing to pain and swelling in the left inguinal region. The swelling was above the size of a pigeon's egg and under rest and warm applications it subsided in about five days leaving well-marked varicocele. In the second case there was a predisposition to varicocele; following the strain there was also a sudden darting pain from the loin to the left testis and incapacity from following his employment. One of these cases has already come under the arbitrator's hands (under the Compensation Act) and is still undecided, the chief defence against the claim being that "an accident is not mentioned in the leading text-books as being the cause of varicocele." I should be glad of some enlightenment on the point.

I am, Sirs, yours faithfully,
ENQUIRER.

⁂ There is nothing intrinsically impossible in a great straining giving rise to a varicocele. It is not, however, a common cause, but anything which produces excessive pressure in the intra-abdominal portion of the spermatic veins may overcome the valves and so bring about dilatation of the pampiniform plexus.—ED. L.

A QUESTION OF NOMENCLATURE.

To the Editors of THE LANCET.

SIRS,—In the "Mirror of Hospital Practice" in THE LANCET of May 23rd, p. 1444, two very interesting cases under Sir W. J. Collins's care are reported at length under the name of "Richter's Hernia." Should it not be *Littré's hernia?* I believe Littré was the first to describe partial inclusion of the intestinal lumen in a hernial sac as a cause of intestinal obstruction and that this particular condition has up to the present been usually termed "Littré's hernia." If any of your correspondents can inform me I shall personally be glad and I feel sure that candidates for the Fellowship will be glad of a reduction in the number of conditions and operations associated with a name, however renowned, instead of a descriptive adjective, referring anatomically or pathologically to the position or causation of the lesion.

I am, Sirs, yours faithfully,
May 25th, 1903. M.D.

⁂ We publish our correspondent's letter, but the point that he raises was discussed in an annotation which appeared at p. 1460 of THE LANCET of May 23rd, and which he appears to have overlooked.—ED. L.

DANIEL LAMBERT'S CLOTHES.

ACCORDING to the *Westminster Gazette*, at an auction sale recently held at the London Inn, Stamford, the clothes of Daniel Lambert, the famous eighteenth-century giant, were offered to the bidders, together with those of Tom Thumb, which were left at the hotel by the dwarf as a contrast. The articles have long been, after Burleigh House, the chief attraction of Stamford Town in the eyes of many Lincolnshire county people. Lambert, who weighed 53 stones, died at Stamford in June, 1809. The sum of £75 was offered for the clothes, but the lot was withdrawn.

"ONLY HAVE FAITH."

ON May 16th we reprinted a Christian Scientist handbill which promised "No more death" to those who "Only have faith." The following story is given by a reviewer in the *Daily Express*:—

> A woman who went to a Christian Science physician and told him that her husband was ill received this assurance: "Tut, tut; your husband is not ill but only thinks he is. Tell him so and come back and inform me next Tuesday week how he is getting on."
>
> On the following Tuesday week the distracted wife called upon the Christian Scientist.
>
> "Well," inquired the faith healer, "and how is your husband now?"
>
> "He is all right; there is nothing whatever the matter with him," she replied. "The only trouble is that he thinks he is dead, and the undertaker thought so too, for he buried him yesterday."

THE "DIAMOND CIGAR."

THE "diamond cigar" presents a distinct novelty as regards shape, which is considered to prevent the concentration of tarry matters and nicotine at the mouth end of the cigar when smoked. Of course, it is well-known that the products of the destructive distillation of the leaf are apt to collect at the mouth end of the cigar as smoking progresses. In order to avoid this accumulation of the nicotine and moisture the diamond cigar is constructed in the following way. A strip of special Havana tobacco runs through the entire length of the cigar and is surrounded by a short bundle of various Havana tobaccos which form the body of the cigar. The whole is inclosed in a wrapper or outer leaf. The shape of the cigar is thus similar to that of an elongated cork float used in fishing, the two ends being of about the diameter of a cigarette and about an inch long, while the size of the central section is the same as that of an ordinary cigar. The result is that the nicotine and tarry compounds collect at the end of the short bundle and not so much at the tip of the cigar. A practical trial certainly supported this view to some extent, the mouth end being dry and comparatively free from tarry matters when the cigar was finished. These cigars are obtainable from Messrs. Henry Welfare and Co. of 30, Clapham-road, London, S.W.

"THE GREAT PHYSICIAN."

WE have received from Herr Nicolaus Lehmann of Prague a photogravure of a picture bearing the above title by the well-known artist Gabriel Von Max. The picture represents the Saviour sitting at the couch of the daughter of Jairus. Our Lord is holding the girl's right hand, and the artist has very well expressed the gradual awakening from the sleep of death which the touch of the Divine Humanity imparts. The size of the reproduction is 47 by 69 centimetres, the price being £1 10*s*. It is a very dignified and simple conception of a striking incident.

THE KIN-HEE QUICK POT.

THIS tea or coffee pot, for it may be used for either purpose, has the merit of simplicity. It consists of two containers, the upper one, the infusing pot, being inverted and fitting into the lower one. The infusion of coffee or tea is made in the upper container or infuser which is detached for the purpose. When it is considered that the tea or coffee has been sufficiently infused the lower container which is fitted with a spout and handle is pressed firmly into the top of the infusing pot. The whole apparatus is then inverted so that the infusing pot is at the top and the container below. By means of a valve at the top of the infusing pot air is allowed to enter and the infusion then passes through a cloth strainer into the lower pot. Both infusion and percolation are thus effected. The result is excellent in regard to making either tea or coffee by this method. The time of infusion is under absolute control, there is no loss of fragrance or aroma, and the injurious astringent matters may be rejected. This principle in the making of both tea and coffee is physiologically correct. A specimen Kin-Hee pot in white metal was submitted to us for inspection and trial by Kin-Hee, Limited, 6 and 8, Eastcheap.

U. R.—The most comprehensive work on the chemistry of the urine is Neubauer and Vogel's "Harnanalyse"; the last German edition was published by Kreidel in Wiesbaden in 1898, two volumes, price about 22*s*. It could be obtained through foreign booksellers such as Messrs. Williams and Norgate, Henrietta-street, Covent-garden, London, W.C. The following can also be recommended:—"Practical Uranalysis and Urinary Diagnosis," by Charles W. Purdy, M.D.; pp. 392; Philadelphia, F. A. Davies Company; 1900. We understand that the publishers have no British agency so that the book would have to be ordered from America. "Clinical Examination of Urine, with an Atlas of Urinary Deposits," by Lindley Scott, M.D.; London, J. and A. Churchill; 1900. For picric acid testing the late Sir George Johnson's little book published in London about 15 years ago might be consulted. Clinical information will be found in "A Manual of Clinical Diagnosis," by Charles E. Simon; London, Henry Kimpton (13, Furnival-street, Holborn, E.C.); 1900.

Calomel.—Our correspondent would find the following books useful: Osler's "Principles and Practice of Medicine" (Kimpton); Judson Bury's "Clinical Medicine" (Griffin and Co.); Hares' "Therapeutics" (Henry Kimpton); "Clinical Psychiatry," translated by Dr. Defendorf (Macmillan and Co.); Mercer's "Psychology, Normal and Morbid" (Swan Sonnenschein); and Gowers's treatises on neurology. For special subjects Allbutt's "System of Medicine" may be consulted.

F. C. K.—The idea is not a new one, *vide* THE LANCET, vol. ii., 1871, p. 860, vol. i., 1875, p. 358, and vol. i., 1887, p. 894. We can see neither advantage nor disadvantage in the proposal.

M.B.—Calomel and starch.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 28th, 1903.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
May 22	30·15	S	...	128	78	51	63	68	Fine
" 23	30·33	N.E.	...	121	71	55	54	61	Fine
" 24	30·41	E.	...	115	66	47	47	51	Cloudy
" 25	30·30	E.	...	120	70	43	51	55	Fine
" 26	30·26	N.E.	...	115	70	48	53	60	Fine
" 27	30·15	E.	...	123	70	49	55	59	Cloudy
" 28	29·89	E.	...	103	64	57	58	62	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS

METROPOLITAN HOSPITALS

MONDAY (1st [illegible] P M), St
Thomas's (3 [illegible] 2 30 P M)
Middlesex [illegible] (2 P M)
Samaritan [illegible] oho square
(2 P M) R [illegible] (4 P M)
Gt Norther [illegible]) London
Throat (9 30 A M), Royal Free (2 P M), Guy's (1 30 P M)

TUESDAY [illegible]
Thomas
minster
(2 P M)
(2 30 P.M
(9 30 A.M
Throat

FRI [illegible]

SATURDAY (6th) —Royal Free (9 A M) London (2 P M), Middlesex (1 30 P M), St Thomas's (2 P M), University College (9 15 A M) Charing Cross (2 P M) St George's (1 P M) St Mary's (10 P M) Throat Golden square (9 30 A M), Guy's (1 30 P M)

At the Royal Eye Hospital (2 P M) the Royal London Ophthalmic (10 A M) the Royal Westminster Ophthalmic (1 30 P M) and the Central London Ophthalmic Hospitals operations are performed daily

SOCIETIES

WEDNESDAY (3rd) —OBSTETRICAL SOCIETY OF LONDON (20 Hanover square, W) —8 P M Discussion on Chorionepithelioma and the Occurrence of Chorionepitheliomatous and Hydatiform Mole like Structures in Teratomata (opened by Dr J H Teacher of Glasgow (introduced by Dr Eden) by a paper and epidiascope demonstration) The following have notified their intention to speak and show specimens—Dr P Horrocks Dr F W N Haultain Dr W E Fothergill Mr H Briggs Dr A Helme Dr H Spencer Dr A H N Lewers Dr W H Tate Dr T W Eden Mr J H Targett Dr T G Stevens, Dr J M Kerr Dr J F McCann, Dr E W A Walker, Dr R Andrews and Dr C Lockyer 7 30 P M Specimens will be exhibited

THURSDAY (4th) —NORTH EAST LONDON CLINICAL SOCIETY (Totten [illegible]

FRIDAY [illegible] OF LONDON (20 Hanover-
square [illegible] and Instruments will be
shown [illegible] Potter, Dr W Wingrave
Mr de [illegible]

LECTURES, ADDRESSES, DEMONSTRATIONS, &c

TUESDAY (2nd) —MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22, Chenies-street, W C) —4 P M Sir W H Broadbent Clinique. (Medical)

POST GRADUATE COLLEGE (West London Hospital Hammersmith road W) —5 P M Mr Bidwell The Diseases of the Stomach amenable to Surgical Treatment

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen square Bloomsbury) —3.30 P M Dr Ormerod: Myasthenia

WEDNESDAY (3rd) —[illegible] POLYCLINIC
(22, Chenies street [illegible] Clinique
(Surgical) 5 15 P M [illegible]
POST GRADUATE COL [illegible] mersmith
road W) —5 P M [illegible]
HOSPITAL FOR CONS [illegible] (Bromp-
ton) —4 P M Dr Mackenzie: Empyema
[illegible] UATES COLLEGE AND POLYCLINIC
[illegible] M Mr Hutchinson: Clinique
[illegible] rrison: Hæmaturia.
[illegible] London Hospital Hammersmith
[illegible] Treatment of some Injuries and
[illegible] DISEASES OF THE
[illegible] W Tunnicliffe:
[illegible] (Post Graduate

CHARING CROSS HOSPITAL —4 P M Dr Hunter: Medical Cases (Post-Graduate Course)

THE HOSPITAL FOR SICK CHILDREN (Gt Ormond street W C) —4 P M Lantern Demonstration —Dr F J Poynton: The Lesions [illegible]
[illegible] NDON (Physio-
[illegible] The Relation

FRIDAY (5th) —MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22 Chenies street W C) —4 P M Mr M Gunn: Clinique (Eye) 5 15 P M Dr S Taylor Parasites of the Gastro intestinal Canal

POST GRADUATE COLLEGE (West London Hospital, Hammersmith road W) —5 P M Dr Beddard The Physiology and Pathology of the Ductless Glands

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub Editor "

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager "*

We cannot undertake to return MSS not used

MANAGER'S NOTICES.

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W C , are dealt with by them! Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are —

FOR THE UNITED KINGDOM		TO THE COLONIES AND ABROAD	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
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An Address

ON

THE PERILS AND COMPLICATIONS OF FIBROIDS AFTER THE MENOPAUSE.

Delivered before the Wimbledon and District Medical Society on May 8th, 1903,

BY J. BLAND-SUTTON, F.R.C.S. ENG.,
SURGEON TO THE CHELSEA HOSPITAL FOR WOMEN; SURGEON TO OUT-PATIENTS AT THE MIDDLESEX HOSPITAL.

GENTLEMEN,—It was formerly taught and believed, even by thoughtful men, that uterine fibroids ceased to be troublesome with the cessation of menstruation. It is quite certain that a new chapter in their natural history requires to be written.

Uterine fibroids stand almost alone among tumours in the peculiarity of their age distribution, for they only arise during the menstrual period of life (from 15 to 45 years of age), but they stand absolutely alone among tumours in possessing another remarkable character. As a rule they cease to grow after the menopause and in some instances they undergo a marked diminution in size. Many writers are of opinion that they may even disappear. This must be a very exceptional phenomenon and hard to prove satisfactorily and upon which I have always entertained the gravest doubts.

The object of this communication is to discuss the complications of uterine fibroids after the menopause, for though, as a rule, they cease to grow after this event, they are frequently sources of great peril to life, not only in coexisting with other serious diseases of the uterus and ovaries, but the very fact that they are apt to diminish in size is in itself an occasional element of danger. Apart, however, from these conditions, the fibroids themselves are mainly sources of trouble on account of the degenerate and septic changes to which they are liable.

At the outset of this address it is essential to bear in mind that the presence of a fibroid in the uterus in a very large proportion of women has a very malicious influence in delaying the menopause. Many times I have removed fibroids from the uterus in patients between the fiftieth and sixtieth years of life in whom the monthly losses of blood were more profuse than at the age of 25 years. It is an important question whether the irregular and long maintained vaginal fluxes of blood in women with uterine fibroids after the fiftieth year of age should be regarded as menstruation in the proper acceptation of the term. On the other hand a woman may enter on the menopause at 42 or 45 years of age though a large fibroid may occupy the cavity of the uterus. In October, 1896, I removed from a woman, aged 45 years, a fibroid weighing 10 pounds sessile on the fundus of the uterus. She ceased to menstruate at the age of 42 years.[1] An early menopause under these conditions is about as rare as is a fibroid taking on rapid growth after the menopause. My earliest experience of this is very vivid in my mind, because it happened in the first patient on whom I performed hysterectomy with intraperitoneal treatment of the stump. The patient was a childless married woman, 48 years of age, who was known to have had a fibroid for nine years associated with metrorrhagia; in October, 1889, the catamenia ceased. Subsequently the tumour increased in size and became impacted in the pelvis and interfered with th [illegible]

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in itself occasionally a source of danger, especially when pedunculated, for the tumour may be so big that its size prevents it from tumbling into the pelvis, but after the shrinking consequent on the menopause such a fibroid may fall into the true pelvis and become impacted. This, I admit, is a very rare complication, but it happens. In 1902 a patient, 55 years of age, who had her menopause at her forty-seventh year, was placed under my care in the Chelsea Hospital for Women for recurrent attacks of retention of urine due to a tumour of this kind. So long as the patient remained quiet she had no trouble, but a long walk, jolting in an omnibus, or running down stairs caused the tumour to fall into the true pelvis and to obstruct the urine; the patient would send for her medical attendant and he would push the tumour out of the pelvis and relieve the retention. At last the retention occurred so frequently that I was asked to remove the tumour; it was pedunculated, grew from the fundus of the uterus, and was equal in size to a turkey's egg and very hard. Since the operation she had remained free from retention of urine. Rare as complications of this kind undoubtedly are they are outdone on the score of rarity by the remarkable case recorded by Arnott. A maiden lady, aged 72 years, was knocked down by a large dog and fell forwards on the pavement; she died in 34 hours. At the necropsy a circular hole was found in a coil of ileum which lay between the anterior abdominal wall and a large calcified fibroid of the uterus.

Let us now deal with what I regard as the most frequent and the greatest danger connected with uterine fibroids after the menopause—viz., necrotic and septic changes. During the menstrual period of life fibroids generally possess an abundant supply of blood. In some instances they are so vascular that they are like huge cavernous angiomata, as those who have occasion to deal with them surgically know full well. In patients who retain their tumours till the menopause (and they are numerous) the cessation of menstruation is accompanied by a remarkable abatement in the blood-supply and the tumour ceases in many instances to grow, but the very fact that the nutritive irrigation, so to speak, of the tumour is arrested leads to degenerative changes and the fibroid becomes in many instances a dead sequestered body and so long as septic organisms are denied access it will remain inert; when from various causes putrefactive organisms gain access to these essentially dead tumours the results are often dire in the extreme.

It is far easier to prove that putrefactive organisms do obtain access to these dying or dead fibroids than to tell how they get to them. There is, however, one mode of access which to my mind is undeniable. The fibroids which give rise to most trouble after the menopause are the submucous variety and there seems a strong tendency when the uterus passes into its resting stage and the fibroid is shrinking and dying for the organ to attempt the extrusion of the tumour. A careful study of the cases which have come under my observation shows that in the majority of troublesome post-menopause fibroids a large proportion of them have undergone partial extrusion or the mouth of the uterus is widely dilated and renders the ingress of germs an easy matter. It is, of course, desirable to furnish some facts as to the relative frequency with which fibroids become necrotic and septic after the menopause. For this purpose there are some records available of an extremely valuable kind.

Recently Dr. C. J. Cullingworth has published a useful paper on the surgical treatment of uterine fibroids in which he has particularly analysed the conditions which rendered operative interference necessary and in some imperative. Among 100 consecutive cases of this kind distributed between the twenty-third and sixty-first years of life ten of the patients had attained the fiftieth year and onwards. The changes in the fibroids in these elderly women were in all instances necrotic or septic in character. Subsequently Mrs. Scharlieb reported an analysis of 100 consecutive cases, their ages ranging from 18 to 68 years, carried out on Dr. Cullingworth's lines. Seven of the patients were over 50 years old. Mr. C. J. Bond of Leicester published a consecutive series of 50 cases in which hysterectomy was performed for fibroids. Four of his patients were 50 years old and upwards. The oldest patient on the list is noteworthy. She was operated upon for a fibroid in her fifty-sixth year, but she had her menopause at 40 years.[3] Dr. Lionel Provis, registrar to the Chelsea Hospital for Women, at my suggestion, made a list of 100 consecutive cases of operation for fibroids treated in this institution by the staff generally. The results are instructive. The youngest patient was 25 years of age and the oldest was 66 years of age, and of this number 11 of the patients were aged 50 years and upwards. The distribution is as follows: from 25 to 29 years, five operations; from 30 to 39 years, 37 operations; from 40 to 49 years, 47 operations; and from 50 to 66 years, 11 operations. The oldest patient in this particular series was aged 66 years and she had a very large septic submucous fibroid which had to be removed piecemeal. In 1902 I performed hysterectomy on a woman, 69 years of age, for a very large septic fibroid and an incarcerated ovarian cyst. The peritoneum had been infected through the left Fallopian tube before the operation and the patient died.[4] My oldest patient was 73 years of age and I removed a mass of fibroid weighing 28 pounds with success. The operation, which took place at the Middlesex Hospital, was a necessity because the tumour had become so cumbersome that she could not rest in bed.[5]

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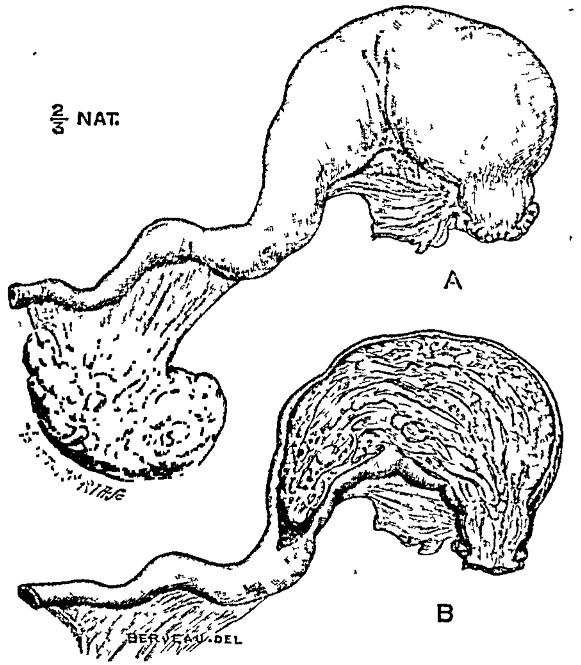
[1] Transactions of the Obstetrical Society of London, 1897.

[2] Middlesex Hospital Reports, 1890.

[3] THE LANCET, Jan. 17th, 1903, p. 162.

It will be clear to an impartial observer that even by fixing the menopause at the late age of 50 years uterine fibroids are very often sources of trouble, ill-health, and great peril to those who unfortunately possess them. One of the greatest perils which can happen to a woman with a fibroid in her uterus is to become pregnant, but after the forty-fifth year she is beset with a danger of quite another kind—namely, cancer of the endometrium. I have dealt with this serious subject so recently[6] that here I need only express it in the form of an aphorism. *When a woman with uterine fibroids has passed the menopause and begins to have irregular profuse uterine hæmorrhages it is extremely* probable that she has cancer of the body of the uterus. In a remarkable case of this kind under my care the patient had primary cancer of the Fallopian tube. Her case is fully recorded in the Transactions of the Obstetrical Society for 1902. She was a childless married woman, aged 57 years, and had her menopause at the age of 49 years. For many years she had suffered from what was regarded as a large fibroid tumour. Some months before coming under observation the patient complained of irregular, frequent, and rather abundant fluxes of blood from the vagina and this led me to suspect that the fibroid had become septic or that cancer had developed in the uterus. However, when an operation was performed I found the fibroid to be quite healthy, also the endometrium, but the ampulla of the left Fallopian tube contained a soft vascular tumour (*vide* illustration) which proved on microscopical examination to be a typical example of cancer and a portion of it had made its way through the cœlomic ostium of the tube and infected the peritoneum.



A. The ampulla of a Fallopian tube with cancer. B. The tube in section showing a portion of the cancer making its way through the cœlomic ostium.

The subject may be summarised for discussion something in this way. Fibroids only arise in the uterus during menstrual life—that is, from 15 to 45 years of age. As a rule they cease to grow after the menopause; after this event they may shrink. Some writers believe that they occasionally disappear, but this is very hard to prove and harder still to believe; therefore, as a concession to tradition, it may be described as a phenomenon about as rare as the advent of a comet. After the menopause fibroids sometimes grow and though an unusual condition it rests on the accurate observations of trained observers. Though a fibroid may cease to grow after the menopause it is still liable to extrusion from the uterus and gangrene with all its dangers and enmity to life.

Surely there is nothing in the whole range of surgery more ironical than a woman spending 20 or even 30 years of her life as a chronic invalid on account of a uterine fibroid in the expectation that at the menopause she will be restored to health and begin a new life and then to realise that far from this dream being fulfilled the fibroid becomes necrotic, extruded, or septic, and places her life in the gravest peril, and that she may die in spite of surgical intervention.

A Lecture

ON

MENTAL UNSOUNDNESS AMOUNTING TO CERTIFIABLE INSANITY AND ITS DIAGNOSIS.

Delivered at the Medical Graduates' College and Polyclinic on April 29th, 1903,

By ROBERT JONES, M.D., M.R.C.P. Lond., F.R.C.S. Eng.,

RESIDENT PHYSICIAN AND MEDICAL SUPERINTENDENT OF THE CLAYBURY ASYLUM.

Gentlemen,—The line of demarcation between sanity and insanity is an ill-defined one and the borderland province between the two is a narrow, uncertain, and variable territory. Its exact limitations are determined by the discretion and judgment of the certifying medical practitioner and the key of interpretation in this regard is in the hands of each one of you—who may be called upon at any time to use it. For the responsibility of this distinction heavy penalties—nay, even financial disaster—may be incurred, as in this country it is a serious matter to deprive an individual of his liberty and in an action of so serious an import the burden of proving insanity to the satisfaction of a non-expert British jury rests with the certifier. It is therefore well to remember that a medical man may be subject to an action at law on the part of any certified person who upon his discharge from the licensed house or asylum is entitled to a copy of the certificates and other documents upon which his alleged lunacy was based. Moreover, a medical man may be convicted of a misdemeanour if, in the words of the Act, he has made a wilful mis-statement in any medical or other certificate or in any statement or report of bodily or mental condition under the Act. It thus behoves every practitioner—even the youngest and most infallible—not only to exercise caution, vigilance, and due care in the recording of observations, the narrating of facts, and the deducing of conclusions necessary for the compilation of his certificate, but also that he should fortify himself with a sound—*I will not say* expert—knowledge of mental diseases so that he may with confidence discharge the responsibilities which the law imposes upon him in the practice of this branch of forensic medicine and thus be able to act with a readiness, accuracy, and precision which the possession of this knowledge implies.

Insanity has long since ceased to be looked upon as something mysterious or as a possession by evil spirits. It is nothing more or less than a disturbance of mind involving a disturbance of conduct—the former a sign and the latter a symptom of disturbed nerve processes. With every mental change it is probably without exception that some change occurs in the central nervous system. There is thus no mental state without its corresponding nervous state—"No psychosis without neurosis." What the relation and interdependence of mental to bodily condition may be is too explained and the principle of "psycho-physical parallelism" stands merely as a statement of fact and not as an explanation. To suggest or to imply causation on the material or on the immaterial side is unjustifiable. By the term "mind" I do not mean as ordinarily that mind connotes something spiritual or material which lies behind the particular manifestations of mental life—anything metaphysical or mysterious behind mental processes. I use the term "mind" to refer to the sum total of mental processes which are experienced during a lifetime and in its psychological sense to imply feelings, impulses, and ideas. Another term frequently referred to in the explication of mental diseases is "consciousness." In my remarks the term is taken to imply the sum total of mental processes which make up *present* experience—the actual NOW. An acquaintance with the elements of psychology affords considerable assistance to the student of mental problems, for it enables him to analyse concrete or actual mental experience into its simplest components, to discover how these combine and by what laws, and also to bring them into connexion with their physiological or bodily conditions.

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[4] Transactions of the Obstetrical Society of London, 1903.

[5] Ibid., vol. xli.

[6] Clinical Journal, Oct. 23rd, 1901.

It is well known that the cerebral cortex is the most vascular tissue in the body and it is therefore natural to seek for important changes indicating insanity in the intricate nutritive plexus of the cerebral blood-vessels and the part of the brain mantle supplied by this plexus. The microscopic appearance of the brain after gross dementia seems to point out that the number and size of the cells in the second layer of the cortex vary in direct relation to the amount of dementia, and we may assume that the morbid anatomy of the cells of the forebrain—the prosencephalon—is closely connected with disturbances of mind. But hitherto pathology has not illumined the relationship of mind and matter nor has it enabled us to do more than merely assert that when there is brain disease there also is mental disease. We have no pathological classification of insanity, and, broadly but erroneously, we can only state that insanity is a symptom-complex which may be due to an inflammation of the brain and its membranes, to a brain injury, a brain defect, a malnutrition, or to a reflex disturbance, and that the symptom-complex is nothing more or less than an excess, a deficiency, or a perversion of normal mental processes. The pathology of insanity throws absolutely no light upon the pure and primary psychoses and no changes in the brain have been discovered or described as in any way characteristic of, or *corresponding to, the changes in consciousness* which are observed to occur, after death by chloroform or alcohol or after such drugs as strychnia, conium, morphia, &c., or in connexion with such diseases as tetanus, hydrophobia, &c., in which marked mental as well as physical symptoms are known to occur. Indeed, it is not improbable that many of the changes which have been described in the cortical cells as indications of insanity either represent gross dissociations of nerve molecules which may occur at the moment of death or [illegible] -estigator and [illegible] ces. The finer [illegible] are still sufficient to produce mental disturbance, remain undiscovered and up to the present we must remain content with such platitudes as that "the brain is the organ of mind," that it is "the mirror of the outer world" or more abstrusely and equally vague that "mind is force oscillating in the protoplasm of the cell," without in any way throwing light upon the nature of the parallelism which is our hypothesis. *The fact therefore remains that positive observation on* which to base a pathological classification of insanity is still a desideratum. As to a classification not based upon pathology, which is from a scientific point of view both arbitrary and artificial, there is consolation, if not satisfaction, that we have one based upon symptoms which, after all, is practical, which can meet the everyday requirements of the practising physician, and which is in the main what concerns us to-day.

At the present moment there are probably no less than 110,000 certified insane persons in England and Wales alone, of whom approximately about 50,000 are males and 60,000 are females. There are probably also for every certified male lunatic two other persons who, by heredity and predisposition, are on the borderland between sanity and insanity and from whose ranks are recruited the majority of cases of "occurring" insanity. According to the division of insane persons into private and pauper classes do patients require either two or one medical certificate for their detention, and as there are in England and Wales about 23,000 registered medical men and women each medical practitioner has the responsibility at his own door—if an average were taken—of having deprived at least four persons of their liberty and franchise. Not that this has been unnecessarily or unjustifiably effected. In all probability, nay, in all certitude, this deprivation of freedom has been both necessary and justifiable, not only for the good of the patient, the interest of his property, and the safety of his family, but also for that of society at large.

In order fully to estimate the import of mental unsoundness with a view to certification we have to bear in mind that the standard of mental health is a variable one and that not only have the symptoms presented by the individual to be considered but also his relation to the world in which he exists and in which he is maintained. In the brief time at my disposal I can do no more than merely hint at or indicate the varieties and degrees of mental unsoundness which may prove of assistance to the medical practitioner in his estimate of certifiable insanity and I will consider two points: firstly, what symptoms constitute mental unsoundness or insanity; and, secondly, the consideration of these symptoms so that we may be able to analyse the essential nature of the insanity of which the symptoms are but evidence.

In the latter analysis we shall consider not only the primary psychoses but also those forms of insanity which occur in association with the great neuroses—epilepsy, hysteria, and chorea—as well as those cases of dementia which fall to the lot of the neurologist and which are due to coarse formative lesions, such as are induced by neoplasms (specific, innocent, and malignant), parasites, special toxins, meningitis and those due to vascular changes, thrombosis, embolism, hæmorrhages, softening, sclerosis, &c. It is acknowledged that certain mental states have certain bodily conditions as almost invariable accompaniments and no inconsiderable assistance to diagnosis is obtained from these, to which we shall refer later.

Firstly, as to what constitutes mental unsoundness or insanity. Delusions have been considered both by the lay as well as the legal mind to be the essential characteristic, and although this departure from normal mental health often finds the readiest expression by the patient himself, and although also it offers the greatest superficial contrast between sanity and insanity, the presence of illusions, hallucinations, or delusions, although strong indications, are not absolute signs of insanity. *Joan of Arc, Peter* the Great, [illegible] od women [illegible] delusions [illegible], yet they have been able to carry out all or most of their particular duties in life.

In the development of the individual certain instincts deeply implanted in man's nature and characteristic of him are gradually evolved. These relate, firstly, to his own support, his search for food, his retention of animal heat, and his self-preservation by security from attack and his capacity for self-defence; and secondly, to his instinct of reproduction and the support and care of his young by means of which his species is perpetuated. In the course of his physical and mental growth certain reverses or checks are liable to occur to the instincts named, to his perception of the various impressions which reach him from the outer world, or to the power which he has of interpreting these impressions and associating them together. When these reversions or checks, acting through circumstances from *without or causes from* within, affect his perceptions or his interpretation of perceptions we have the cause of illusions and hallucinations and when they affect the power of discrimination—the power he has of using old facts in new circumstances by discerning their agreement or disagreement—we have arising hence the elements of delusions; indeed, one form of insanity—paranoia—is looked upon as a pure reversion—an anthropological degeneration in an atavistic sense to an ancestral type in which the mysterious forces or powers of nature are often personified to give an explanation of the delusions, the belief being entertained that nature in some occult way and with occult power acts upon the human organism.

In the discussion of insanity the standard of mental health is, as stated, a variable one, and what would indicate insanity in a person of previously high intellectual power and culture would not indicate insanity in members of a lower order or an inferior race. The beliefs which were creeds and in consonance with those of an early period of as a rule, higher and there is in the early stages an irritability in small matters, an apathy, or a peculiar abstraction, a forgetfulness or tendency to sleep and to be dull with a lack of will power in regard to important events and matters of business. The latter has often been communicated to me by the relatives as common in cases of general paralysis. Physical symptoms evinced by headache, tremor of facial muscles and tongue, of the speech and the handwriting, also occur, the knee-jerks are increased (or possibly in tabetic cases absent), and pupil phenomena (noted in the Argyll-Robertson reaction) confirm the diagnosis of general paralysis. Age has certain controlling influences as already stated. The mental condition of coarse brain lesions is that of dementia and it is accompanied by physical signs according to the locality affected. It is this form which is familiar to the neurologist.

The mental state in association with epilepsy is recognisable by the peculiarly dull appearance of the patient not unlike that of slight drunkenness or of alcoholism, but the delusions if present are religious and sexual. There is a record of previous fits, the symptoms come on suddenly, but there may be marked fury or excitement which is uncontrollable, or there may be a state of more or less prolonged, dreamy, dull consciousness described by Crichton Browne. The mental condition associated with hysteria is of a superficial, changeable, and emotional character with a tendency to foolish mendacity and sexual ideas. That associated with chorea may in pregnant women be of very serious import. As a rule mild dementia accompanies chorea more often than mania or melancholia. Almost all alcoholic forms are characterised by the presence of hallucinations, which are often visual and mostly terrifying, by the presence of fixed delusions of a persecutory nature such as those of poisoning or mutilation; there is also marked amnesia of a special kind. The tremors, absent knee-jerks, and frequent morning sickness may help diagnosis in respect of alcoholic insanity. In some cases of mania there is a prodromal period of depression which is not easy to diagnose from primary dementia, only that explosions usually follow in mania and loss of memory in dementia.

In cases presenting motor excitement it is necessary to determine whether this be due to epilepsy, simple mania, or the maniacal phases of general paralysis. As general paralysis occurs in from 12 to 20 per cent. of all cases of insanity and as it is a disease of mature adult male life and one in which syphilis is a precursor, as also it is one in which dangerous excitement occurs and there is lavish prodigality of means and the disease is incurable, it is necessary to form an early and accurate diagnosis so that removal under care may be effected. It is best for the patient that he should linger out his days in a comparatively felicitous existence, unconscious of his fatal malady, such as may be secured in an asylum.

In conclusion, therefore, when a case of mental unsoundness as defined by our hypothesis is presented to us, we have to consider the import of delusions not only as to their content but also as to their systematisation, the question of psychical weakness in the abstract, abnormal irritability, defect or perversion of will power, and changes in the emotional states; confident that we are doing right by the patient in sequestrating him from managing himself or his affairs if he is suffering from the acute form of any variety of insanity, for all such are potential suicides—if he is suffering from confirmed systematised delusions of a persecutory character, for all such paranoiacs are potential homicides—if he is suffering from the early symptoms of general paralysis or if there are great violence, noise, excitement, and sexual trouble—and that we are doing right by not certifying if the insanity is in a young person of either sex, is due to toxins, or is of a mild or subacute and temporary variety.

Claybury Asylum, Woodford.

THE ROYAL NAVAL NURSING SERVICE.—On Friday, May 29th, Her Majesty the Queen presented badges to two head sisters and 22 nursing sisters of Queen Alexandra's Royal Naval Nursing Service at Buckingham Palace. Rear-Admiral John Durnford, C.B., D.S.O., a Naval Lord of the Admiralty, Inspector-General Sir Henry F. Norbury, K.C.B., K.H.S., R.N., Director-General of the Medical Department, and Staff Surgeon W. J. Colborne, R.N., Assistant to the Director-General, also attended and had the honour of being presented to Her Majesty.

Clinical Remarks

ON

THE TREATMENT OF GANGRENOUS HERNIÆ BY ENTERECTOMY.[1]

Delivered at University College Hospital in February, 1903,

BY ARTHUR E. BARKER, F.R.C.S. ENG.,
PROFESSOR OF THE PRINCIPLES AND PRACTICE OF SURGERY AT UNIVERSITY COLLEGE AND SURGEON TO UNIVERSITY COLLEGE HOSPITAL.

GENTLEMEN,—Some time ago I gave you a few facts as to the results obtained in this hospital from the treatment of strangulated hernia, either by taxis or operation, in 406 consecutive cases (*vide* THE LANCET, May 30th, p. 1495). Certain conclusions seemed justifiable from this study, and above all that the mode of dealing with gangrenous hernia hitherto adopted appears to require modification at the present day. The question what to do in a case of gangrenous hernia is one the seriousness of which is well known to all surgeons of experience, and the factors which make such a case grave are also now fairly well recognised. They have been worked out by the anatomist, the bacteriologist, and the pathological chemist. In a given case, say, of gangrenous femoral hernia we have the following elements of danger: (1) the gut is destroyed by necrosis over a greater or less surface and therefore it cannot be returned into the abdomen; (2) the dead portion is septic in the highest degree; (3) the fluid of the sac, if there be any, is highly septic and may run back into the abdomen and infect it if the constriction has been divided before the sac has been well cleansed; and (4) the condition of things within the abdomen is also fraught with risk. Here the gut above the constriction is loaded with retained fæcal matter which is virulent in proportion to the time it has been pent up in a stagnant condition. The bowel is distended by this fluid, often to an enormous extent, and it is paralysed owing to causes unnecessary to trace for the present. But not only is it distended and paralysed but its structure is in many cases much altered. Its mucous membrane is inflamed, or even ulcerated (*vide* Case 3 below), from the point obstructed upwards, *often for some feet.* The submucosa and muscular coat are œdematous and the serous covering is sodden and discoloured from extravasation of blood; it may also be flecked with patches of lymph either on its free surface or in its subserous layers. In this condition it is now well known that the bowel, although its continuity is unbroken, can no longer offer much resistance to the passage through its walls of septic organisms and sooner or later these transude and set up a septic peritonitis. This has been long known of the bowel caught in the sac. But it is now clear that the same infection will take place sooner or later within the abdomen from the unbroken bowel above the constriction if the evacuation of the retained fermenting fæces be not provided for. Probably a certain amount of toxic exudation from the obstructed bowel is tolerated by the peritoneum as long as it is sound and is removed by its lymphatics, but the time comes when it is not removed and peritonitis is set up.

But beside these dangers the patient has probably been exhausted by vomiting and inadequate feeding for days. The vomited matter has been foul and in many cases it has been inhaled in fluid or vapour form into the lungs with more or less damage to them. *Moreover*, the patient has been confined to the recumbent position and the bases of the lungs may have been imperfectly expanded owing to the position and the painful condition in the abdomen and so have become œdematous, rendering them particularly vulnerable to infection. Again, the toxins stored up in the bowel above the constriction are absorbed and exert a depressing effect upon the whole economy.

Now it is in these retained contents of the bowel above the constriction and in their local and general toxic effects that the main danger of strangulation with or without mortification lies. Their irritating properties have been known ever since the artificial anus has been made for their evacuation in gangrenous hernia. The rapid production of excoriation or even ulceration of the skin around such an opening bears witness to their acrid nature. Again, the facts so often noted in former times when herniæ were more frequently reduced by taxis alone than now point in the same direction. We have all seen many such cases attacked after reduction by severe diarrhœa with blood-stained stools and other evidence of acute enteritis often terminating in death. The cause here has been explained to be the rapid rush of the pent-up toxic fluid into the empty and starved intestine below the constriction, setting up there an acute inflammation continuous with the inflamed and sodden tract above. Again, how often have we seen in the days of frequent taxis a patient die from peritonitis starting from the sodden but still unperforated loop returned into the abdomen or from pneumonia combined with moderate enteritis or peritonitis (*vide* Table II.[2]). But in addition to all this the bacteriological examinations of the fluids retained above the constriction made within the last few years by a number of observers have amply demonstrated its virulence and the chemical analyses its toxicity. Cushing's bacteriological studies on the swarming life found in the first discharge from an artificial anus for gangrene and the gradual disappearance of the bacteria as evacuation of the contents proceeded show this most fully.

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[1] We have thought it best to publish this lecture in immediate sequence to that published last week, as though delivered at some distance of time apart the two are practically different portions of the same subject.—ED. L.

Now all this and the bad results of the earlier *primary* resections for gangrene have gradually led to the conclusion held by the majority of surgeons at the present day, that, in the words of Cushing, quoted here as one of the most recent and thoughtful writers on the subject and one of the most progressive surgeons, "If the gut is not viable experience has shown that the immediate establishment of an intestinal fistula is much the safest procedure, as this permits the immediate escape of the retained toxic products from the proximal bowel." Again, lower down: "Occasions doubtless arise when an immediate anastomosis can be made, but under ordinary circumstances I believe it is preferable, as stated above, to establish an artificial anus and allow all the contents of the bowel to be rapidly evacuated." But that the ultimate result in such cases is not generally good even in his hands may be inferred from the following lines in the same publication: "The cases with gangrenous bowel present a more difficult problem. With only two or three exceptions at this hospital (the Johns Hopkins) such conditions have led to a fatal termination. On one occasion Dr. Bloodgood resected and sutured a gangrenous bowel in a young man under general anæsthesia with recovery." The experience at University College Hospital bears out this statement. I find that in a series of years reaching down to date out of 20 consecutive cases of the formation of an artificial anus for gangrene only two ultimately recovered.

But in spite of this dismal experience the rule is still followed to day by most surgeons that in cases of gangrene of the gut the safest thing to do is to make an artificial anus. And yet notwithstanding the wide acceptance of this rule I venture to think that the time has come for its modification. My own experience based upon the last ten or 12 cases of gangrenous or greatly damaged intestine which I have had to treat has forced me to the conclusion that this rule, however sound in the past perhaps, is not so applicable at the present day.

Let me define my position a little more clearly. It seems to me that for those cases of gangrenous bowel in broken-down individuals who have been neglected or badly treated and who come to us almost moribund the rule must still hold good. Any long operation, and above all any prolonged general anæsthesia, will almost certainly be followed by death. The formation of an artificial anus, on the other hand, in these cases is easily and rapidly done under local anæsthesia and offers the patients the best if slender chance of recovery.

But in those instances in which our patients reach us in tolerably good *general* condition, although the state of the intestine is hopeless, I venture to think that a *wide-reaching* resection of the bowel offers the best prospect of recovery. Such cases come to us nowadays, I think, as a matter of observation in relatively greater numbers. The delay on the part of the public is less in seeking operative aid, and the pernicious practice of drenching these patients day after day with purgatives is less widespread than formerly. The previous treatment before they are handed over to the surgeon may still be dilatory, but it is more usual now to find that such cases have been placed under opium and the application of ice with occasional attempts at taxis. But, at any rate, they have been spared the constant forcing of the bowel under [illegible] quently increased [illegible] local condition of [illegible] more frequently in a better *general* state than formerly. This, at least, is my experience in a fairly large number of cases. And it has led me to the following conclusions.

1. The most imminent danger to the patient with a greatly damaged or actually gangrenous loop of intestine *lies in the condition of the bowel for the three or four feet above the constriction.* If this is simply put back or an artificial anus made the risks are enormous. In either case it only *slowly* relieves itself, in the first instance by passing on its toxic contents into healthy bowel below, there to be more or less absorbed with the further production of enteritis and toxæmia, and in the last by slowly discharging on the surface of the body. It must not be forgotten that this evacuation will be *slow*, for the distended and sodden bowel is in a state of paralysis often for days after the relief is given. In the meantime the patient is on his back with all the risks of pneumonia, toxæmia, and peritonitis.

2. In a case where the patient is in a reasonably good condition I cannot help thinking that to excise this dangerous portion of paralysed and sodden or ulcerated gut *en bloc* together with all its virulent contents is relatively the safest course. At one sweep the three or four feet of gut with pints of toxic material can be cleanly removed. And, moreover, by dividing the gut high up we get a portion less widely dilated and therefore more easily adapted to the contracted lower tube. But this last is not the crux of the situation, for of course we might make a lateral anastomosis. The great point is to remove at once *the contents as well as the diseased bowel* and to make our suture junction in relatively sound and clean gut. It may be objected that this demands a large and long operation and consequently a great strain on a feeble patient. But this is only relatively true in these days of improved technique and is balanced, I think, by the enormous gain to the patient of having a veritable "cesspool" removed from the abdomen cleanly and with it most of the really damaged and dangerous bowel, leaving the part above where there is less paresis or none and where our stitches will hold in sound tissue. But the excision *must be wide.* On this point we need have but little misgiving as far as the general nutrition of the body is concerned. It was pointed out years ago by Senn that in dogs at least one-third of the whole intestinal tract may be removed without any damage to the economy. Since then, in many cases six, seven, or even eight feet of the human small intestine have been removed successfully and without any injury to the general health.[3] If this be so and if, as I venture to think—indeed, it is almost certain—that the risks of gangrene of the intestine depend upon the conditions not only in the dead loop but in the three or four feet of gut above the point of constriction, there need be no hesitation on the ground of doubts as to the general future nutrition in removing any length of intestine up to some six or seven feet. Further, it may be pointed out that in only one particular does it take longer to excise six feet than it does to remove six inches. This is in the treatment of the divided mesentery. But I think that I can demonstrate a method by which the latter can be dealt with rapidly and effectively. Of course, the anastomosis of the actual ends can be made as quickly when several feet have been removed as when only a few inches have been resected and (if the respective lumina are in the former case more alike in size) even more rapidly.

The first case in which the above line of reasoning appeared to lead me to a successful result may now be mentioned briefly as it has already been fully recorded.[4]

CASE 1.—A young man, aged 20 years, was admitted into University College Hospital in July, 1899, for an inguinal hernia of moderate size but distinctly gangrenous after four [illegible] Instead of making an artificial anus [illegible] anastomosis I [illegible] healthy bowel [illegible] stitched, the bowel was divided, and the nearly equal lumina were anastomosed end to end (method described below). A radical cure by Bassini's method followed at once. Recovery was uneventful. The portion of gut removed measured three feet.

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[2] THE LANCET, May 30th, 1903, p. 1496.

[3] Vide author's paper in THE LANCET of April 27th, 1901, p. 1195 containing the bibliography of the subject.

[4] Brit. Med. Jour., Dec. 23rd, 1899.

CASE 2.—The next case[5] was that of a woman, aged 46 years, with a gangrenous femoral hernia of three days' standing. Here the procedure was the same, but only one and a half feet were removed and the sac was drained with gauze for a few days. Recovery was without a hitch.

CASE 3.—The third case[6] was still more to the point and convinced me that extensive tracts of small intestine can be rapidly removed with no more shock to patients than short. And further, that with the removal of the over-filled, engorged, and ulcerated proximal loop, one of the great dangers was at once eliminated which are so potent in such cases. The patient, a feeble woman, aged 76 years, was admitted into University College Hospital on Jan. 10th, 1901. For two years she had had a large ventral hernia in the scar of an ovariotomy performed 30 years before—in 1870. On Jan. 8th and 9th she had not felt well and had had pain in the abdomen but no sickness. At 10 A.M. on the 10th the patient was seized with severe pain in the abdomen and vomited bile-stained fluid. The large tumour was swollen and tender; no more flatus was passed and she became faint. Later in the day she had another attack of faintness and sickness and brought up undigested bacon. Her state on admission is thus described in the hospital notes: "Feeble woman with intermittent pulse of 108; face pinched, tongue moist; condition but for age good." At 10 P.M. I operated and on opening the thin scar about one pint of dark, evil-smelling fluid gushed out of the sac. About three feet of strangulated gut were then found constricted by a strand of omentum at the neck of the sac. It had not quite lost its lustre but it was very black, foul, and distended with sanious fluid and its recovery seemed hopeless. I at once measured off with my fingers what was roughly estimated as about six feet (really it turned out to be five feet six inches). At all events I ran it through my fingers until a part was reached above which seemed to be sound enough to retain sutures and to furnish healthy plastic lymph. The mesentery was then clamped and sutured (see below) and the bowel was cut away from it. End-to-end anastomosis by suture followed and the abdomen was closed. The junction was completed in 44 minutes after the beginning of the operation. The last stitch closing the abdomen was finished within 63 minutes from the first cut. There was no shock, a very remarkable fact in the case of such a feeble old woman, and the patient was induced to sit up the next day and afterwards, and as a rule, only to lie down for sleep. I had her placed in an armchair by the fireside on the sixth day. The wound was found to be perfectly healed at the first dressing on the tenth day. Except for a trace of bronchitis and a little diarrhœa from the fourth to the seventh day recovery was uneventful. She presented herself at the hospital more than a year after operation in the best of health.

The surgical registrar's report on the parts removed is specially interesting here.

Five and a half feet of small intestine: three inches from the lower end is the seat of the distal constriction. The gut at this spot becomes intensely congested and hæmorrhagic, of a purple-black colour, and its walls are thickened with intense œdema. At the time of the operation there was a definite groove at this spot which has now disappeared after lying in weak spirit for 12 hours. On tracing the gut upwards from this point the first three feet are all intensely congested, the changes become less marked above, now only pale and œdematous, were operation. There is no groove or sudden change in the pathological appearances to mark the seat of any constriction of the proximal loop of gut, the congestion and œdema becoming gradually less when followed up the gut. On slitting up the gut the mucous membrane of the lowest three feet has a deep purple-black colour and the valvulæ conniventes are so swollen, discoloured, and pulpy-looking that it is difficult to say whether any ulceration exists. After lying some days in weak formalin the parts merely congested became paler and revealed three large patches in the last 18 inches of the gut where the mucosa was hæmorrhagic, partly gangrenous, and superficially eroded. Each patch involved the whole circumference for about three inches and the lowest, where the changes were most marked, had a definite abrupt linear border marking the seat of the distal constriction. In the next foot of the gut above there were two similar but smaller patches of mucous hæmorrhage and erosion only involving a part of the circumference of the bowel for about one inch by half an inch.

This condition of the bowel confirmed my belief that had it been returned into the abdomen whether *with* or *without* the formation of an artificial anus and with all its acrid contents which had already fouled the effusion in the sac nothing could have saved the patient. My only doubt for some days was whether I had removed enough of the bowel to secure a sound material capable of reparative energy for the anastomosis. But, at all events, the whole of the ulcerated portion with the large quantity of toxic material both within its lumen and infiltrating its walls had been removed and there was no evidence in the after history, except a little diarrhœa, that any dangerous amount had been left behind.

If anything was needed to strengthen the conclusion that the removal of large tracts of intestine above a gangrenous portion is desirable it appeared to be furnished by this case, and the absence of shock, even in so old and feeble a woman, seemed to prove that the removal of so much gut is not *necessarily* a severe strain, even upon a feeble patient.

In another recent successful case of a similar kind now to be briefly recorded I had, looking back at the last, no hesitation as to the course to be pursued.

CASE 4.—A woman, aged 52 years, was admitted into University College Hospital on Feb. 7th, 1903, at 1.30 A.M. with a left femoral hernia strangulated since the previous Monday (Feb. 2nd). There had been stercoraceous vomiting for the last two days. The patient was placid and in fair condition. The pulse was 72 and the temperature was 99° F. Coils of greatly distended intestine could be seen moving under the abdominal walls. After washing out the stomach and administration of chloroform lightly the sac was opened, the gut drawn down, and the constricted part found to be grey and gangrenous; in fact, it leaked on being handled and the destruction of the two inner coats could be felt between the finger and thumb. Both limbs of the coil were tied firmly above the constricted portion and the loop was cut away. With the threads used thus a strip of sterile gauze was tied over the cut ends previously well washed with normal saline solution. The abdomen was then opened in the middle line and the proximal and distal limbs were caught in the fingers and drawn from the neck of the sac and out of the abdominal wound followed by the gauze. The proximal loop of the bowel, measuring about two inches in diameter, was very largely distended with dark fluid and deeply congested for several feet. The mesentery was clamped (see below) and ligatured close to the bowel which was then cut away from it to the extent of over six feet with all its foul contents. (Be it remembered that a cylindrical tube two inches across will contain for every foot over one pint.) End-to-end anastomosis was then attempted, as in the other cases, but when nearly completed was found to be unsound owing to the difference of calibre. The portion sutured was therefore cut away and a lateral anastomosis was made higher up and the abdomen closed. The femoral wound was then sutured in the usual way. All this consumed more time (two and a quarter hours) than I like to think of—just double the time spent over the last operation mentioned above. But as the procedure included two enterectomies and a femoral herniotomy and was complicated by a tendency to bleed from the mesentery this is not so surprising. There was no shock and recovery was uneventful except for 13 loose stools within the first week and a little discharge from the femoral wound and from one stitch in the abdominal incision.

I should now like to sketch in outline the procedure I have adopted in these and the last five or six cases.[7] It differs in many respects from those which are commonly described and aims at saving time, securing accuracy of adjustment, and the elimination of undue manipulation with possibly tainted fingers.

When the gangrenous or extensively damaged loop has been drawn well out of the abdominal cavity, as in the last two cases, as far as the points to be divided the wound is packed with one end of a long roll of sterilised gauze, none of which can thereby be lost in the abdomen.

The first point, then, is to select the spot at which the distal and proximal ends of the damaged loop are to be divided, the first some two or three inches below the constriction and the other at any distance above it up to six or seven feet which may be considered to have reached sound bowel. Here the two portions are placed accurately side by side in their long axes and are clamped together firmly with one (first) pair of Doyen's forceps. Next the damaged loop is stretched to its full length so that each half of the mesentery is evenly applied to the other half. The two halves of this structure are then firmly clamped together with a second Doyen's forceps placed parallel to, and about one inch from, the bowel (Fig 1) Another Doyen's forceps is now made to close on the rest of the two leaves of the mesentery if it is too long to be included in one pair. The forceps can start from the point of the second pair, one blade being pushed through the two folds of the mesentery, and should close the latter up to the point at which the two limbs are held together in the first pair used to keep the two limbs of the gut together This latter pair if now removed and is placed only on the distal portion at the same spot (Fig. 2) Another is placed about half an inch more distally and between the two the gut, previously packed with gauze, is divided. The whole of the bowel still closed by forceps is now cut away from the mesentery round to the point opposite the forceps on the distal limb (Fig 2). The piece of bowel thus freed at one end and in its whole length is left hanging out of the abdomen over the edge of the table (Fig. 2) into a basin and then the forceps closing its end is removed, allowing the contents to escape into the basin and *draining the bowel both outside and inside the abdomen.* While the latter process is going on the two halves of the mesentery are stitched together laterally by strong threads passed through them from side to side between the clamps and the cut edges, all being tied on one side and including about two-thirds of an inch of mesentery in each ligature (Fig. 2) This closes the hole in the mesentery and at the same time the vessels going to the edges cut away from the bowel. All this time the contents of the bowel are running off into the basin on the floor. The anastomosis now remains to be made. But before the junction is begun the distended gut within the abdomen can be further unloaded by pressure on the abdominal walls and by drawing the coils if necessary through the fingers with a kind of "milking" action until their contents flow off into the basin below. The advantage of thus unloading the bowel cannot be overrated, and though I did not carry it out in the last case exactly as described I had so planned it for some time

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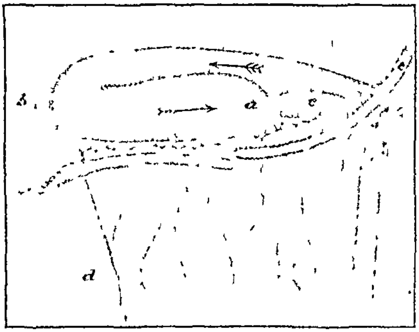
[5] Ibid.

[6] THE LANCET, April 27th, 1901, p. 1186.

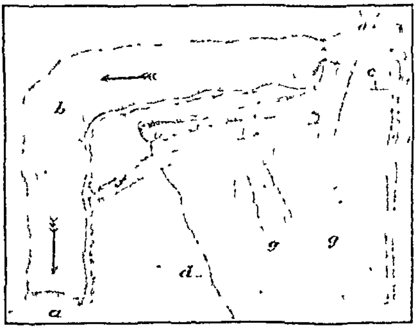
[7] Ibid.

FIG. 1.



a, Constriction *b*, Proximal distended gut. *c*, Distal contracted gut *d*, Mesentery. *e*, Doyen's clamp on both loops *f*, Doyen's clamp on mesentery. The folded loop here represented is for convenience of drawing only a short one.

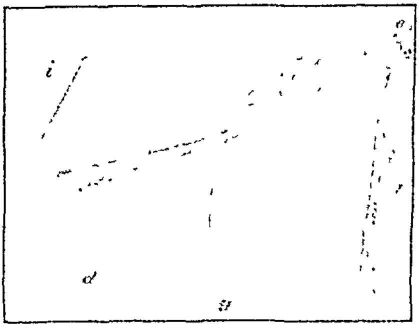
FIG. 2



a, Constriction supposed to be open in a basin on the floor *b*, Proximal distended limb going to basin. *c*, Distal limb clamped. *d*, Mesentery partly tied off. *e*, Doyen's clamp closing distal limb *f*, Doyen's clamp holding folded mesentery. *g*, Threads tying both layers of mesentery.

The junction of the two ends was done in all my last cases as follows. The clamped distal portion and the unclamped proximal, now empty and more or less reduced in size, were laid side by side in such a position that while their attached mesenteric margins corresponded at one point the axes of the two portions crossed one another obliquely. When now both were included in one pair of Doyen's forceps at the point at which their mesenteric borders crossed, their free margins also corresponded by the greater obliquity of the smaller bowel. In other words, when they came to be cut off flush with this forceps more was cut away from the free margin of the smaller bowel than from the proximal tube (Fig 3) which was divided only a little obliquely.

FIG. 3



a Of previous figure has been cut away. *b*, Proximal distended limb *c*, Distal limb clamped obliquely to latter. *d*, Mesentery stitched and cut from bowel *e*, Clamp holding two limbs together. *g*, Tail thread of suture uniting ends through all coats *i*, Sewing needle and thread *in situ* closing part of cut ends

The two tubes thus held together side by side in one forceps are again clamped nearer the abdomen by another pair as close as possible to the first and then being carefully packed with sterile gauze are cut with a knife or scissors flush with the *distal edge* of the first pair of forceps. The freed long coil of intestine and the stump of the distal end held in the forceps applied earlier in the operation now drop off and the gauze packing is changed. Then the forceps at the edges of the approximated tubes is removed, the second pair being left on with the cut edges previously clamped in the first projecting about a third of an inch beyond it (*Fig.* 3).

Now commencing at the mesenteric border, the adjacent edges of the two tubes are stitched together with a continuous suture, taking up *all* their coats until the free margins are reached Here the corner is turned and the opposite edges are similarly stitched until the suture reaches the mesenteric margins again and can be tied with the tail thread at the starting point (*Fig.* 3, *g*). Another forceps is then made to clamp both tubes three or four inches nearer the abdomen and the forceps holding them together for the first row of suturing is taken off. This enables the operator to place another line of continuous suture over the first and *folding it in.* This second row should, of course, take up only the serous, muscular, and fascial layer under the latter, avoiding the mucosa. When this has been carried quite round the bowel and has been tied to the tail thread at the starting point on the mesentery the anastomosis is complete and the forceps higher up is removed. The whole area of operation is now washed with sterile saline solution, especially the anastomosed portion of gut. The latter is then replaced in good position in the abdomen and this is closed with sutures. A pint of normal saline solution may be injected under the skin of the arm towards the axilla and five minims of solution of strychnine hypodermically. All other means for keeping up the patient's vitality, such as warmth and a rectal injection of brandy, are, of course, followed. And besides this I have long made it a practice to encourage such patients to spend all their waking hours in the sitting posture and only to lie down for sleep. This helps in preventing hypostatic pneumonia, as also probably does an occasional thorough rubbing over the back and bases of the lungs. In my oldest patient, aged 76 years, it has been mentioned that she was lifted out of bed to an armchair by the fireside on the sixth day with manifest advantage.

Since I began to employ this method of procedure in 1899 I have done seven enterectomies for gangrenous herniæ. Of these five have recovered. One of the fatal cases died from obstruction due to an old fibrous band pressing on the bowel after its return; the other case did well for several days and then slowly developed peritonitis, starting from the remains of the infected sac which I had unfortunately not drained and which having contained the cæcum was difficult to shut off by suture from the abdominal cavity. There was no failure of any kind at the seat of the anastomosis.[8]

These results, I feel, justify the hope that primary enterectomy may often take the place of the formation of an artificial anus in gangrenous hernia if the principle of *excising a large tract* of damaged gut above the constriction is followed for the reasons given above.

ON THE RELATION EXISTING BETWEEN URIC ACID EXCRETION AND THE BREAKING DOWN OF THE WHITE CORPUSCLES.[1]

BY OLIVER K. WILLIAMSON, M.A., M.D., B.C. CANTAB., M.R.C.P. LOND.,

MEDICAL REGISTRAR TO THE MIDDLESEX HOSPITAL; PHYSICIAN TO OUT-PATIENTS AT THE CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA PARK.

THE important fact that uric acid can under certain conditions be experimentally produced from the white blood corpuscles was first observed by Horbaczewski.[2] Following his research the relation of uric acid excretion to leucocytosis has been worked at by many writers from the clinical standpoint; among these Kühnau[3] and Richter[4] in Germany, Douglas[5] in this country, and Zarnier,[6] Giajmis,[7] and Reale[8] in Italy may be mentioned. If it be true that uric acid is formed from the white corpuscles, the fact is to be explained by its production from the nuclein contained in these cells, either as a result of their destruction or in consequence of their metabolism. The conclusions arrived at by the above-mentioned observers have, when definite, been by no means in agreement. Kühnau, in an extensive and careful research, showed that, following the crisis of lobar pneumonia, at which period there is an increased destruction of the white cells, there is an increase in the daily amount of uric acid excreted. Making observations in various other diseases he found that following a decrease in the leucocyte count there is in most cases a corresponding increase in the daily amount of excretion of uric acid, an increase which he considers is caused by the increase in destruction of the white blood corpuscles. He further showed that in leucocythæmia, in which condition the number of white cells in the blood is largely increased, the daily excretion of uric acid is also markedly increased.

With regard to his observations showing a rise in the amount of excretion of uric acid following a fall in the leucocyte curve, I would point out that the latter may be referable not to an increased destruction of leucocytes but simply to a diminished production. As regards his researches in leucocythæmia, Milroy and Malcolm[9] have shown that in medullary as well as in lymphatic leukæmia, and Hale White and Hopkins[10] have demonstrated that in medullary leukæmia, the daily amount of excretion of phosphoric acid is diminished, so that the increased amount of uric acid excreted in these diseases can hardly be ascribed to an increase in the breaking down of the white corpuscles. The other observers mentioned (with the exception of Richter who lays stress on the importance of making observations extending over a considerable period of time) contented themselves with making in each case at most two or three observations on consecutive days of the numbers of white cells in the blood and comparing these with the amounts of uric acid excreted on the same days. Now inasmuch as the physiological amount of the daily excretion of uric acid varies for different individuals within wide limits (between 0·2 gramme and 1·5 grammes) it is obvious that the amount excreted in a particular individual under pathological conditions may be very largely increased without this amount exceeding these limits. It would seem to follow from this that observations of the ratio between the average amount of the daily excretion of uric acid and the average number of white corpuscles in the blood in a particular case are of less value than consecutive observations in the same case, showing alterations in the one side by side with alterations in the other. It must be confessed that, apart from Horbaczewski's experimental work, the only convincing observations as to uric acid being formed from the white blood corpuscles are those of Kühnau on pneumonia.

My object in making the observations which are recorded below has been to determine in pathological conditions the times in each case observed at which an increased destruction of white cells is taking place, and to notice whether this is followed by an increase in the amount of the daily excretion of uric acid. With this end in view daily observations were made of the number of white corpuscles in the blood for many consecutive days, whilst corresponding daily estimations of the total amount of uric acid excreted in the urine in the 24 hours were also performed. It is fairly obvious that in any condition such as advanced pulmonary tuberculosis, in which there is a leucocytosis for a considerable period of time, there must be associated with this (always assuming that the leucocytes concerned are not specially long lived forms) an increase in the amount of the daily destruction of the white cells. When I refer below to increased destruction (as evidenced by certain alterations in the differential count to be presently explained) it must be understood that I mean an increase in the amount of destruction of the white cells over and above what has just previously been taking place (i.e., a relative increase in the breaking down of the white blood corpuscles). In order to prove that a rise in the amount of uric acid excreted is due to an increase in the destruction of the white cells, it is necessary to show a corresponding rise in the amount of phosphoric acid excreted; accordingly, besides daily observations of the amount of uric acid excreted, estimations of the daily amount of excretion of phosphoric acid were also made. As Milroy and Malcolm say, "it is hardly likely that there is a marked retention of the phosphoric acid in the organism and if there be not, then the absence of the rise in the phosphorus excretion negatives the view that the alloxur bodies are derived from the direct breaking down of the nucleins."

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[8] Since the above was written I have successfully operated on an eighth case of gangrenous hernia and excised the necrosed portion, consisting of a strangulated Meckel's diverticulum.

[1] A thesis read at Cambridge for the degree of M.D.; also read before the Pathological Society of London.

[2] J. Horbaczewski: Untersuchungen uber die Entstehung der Harnsaure im Saugethierorganismus. Wien Sitzungsbericht, Band 98, Abtheilung iii., S. 301. Also Sitzungsbericht der Königlichen Akademie der Wissenschaften Math. Naturw. Cl., Wien, 1889, Band xcviii., pp. 301–318. Also Sitzungsbericht der Königlichen Akademie der Wissenschaften, 1890; Band 48, 1891; Band c., 1892. Also Beitrage zur Kenntniss der Bildung von Harnsaure und der Xanthinbasen, sowie der Entstehung der Leucocyten im Saugethierorganismus, Monatschrift fur Chemie, Band 12, pp. 221–275. c. confr. J. Horbaczewski, Zur Theorie der Harnsäurebildung im Saugethierorganismus, Wiesbaden, J. F. Bergmann, 1892.

[3] W. Kuhnau: Zeitschrift fur Klinische Medicin, 1895, vol. xxviii., p. 534, Experimentelle und Klinische Untersuchungen uber das Verhaltniss der Harnsaureausscheidung zu der Leucocytose. Also W. Kühnau and F. Weiss: Weitere Mittheilungen zur Kenntniss der Harnsaureausscheidung bei Leukocytose und Hypoleukocytose, sowie zur Pathologie der Leukamie, Zeitschrift fur Klinische Medicin, Berlin, 1897, Band xxxii., pp. 482–500.

[4] P. F. Richter: Ueber Harnsaureausscheidung und Leucocytose, Zeitschrift fur Klinische Medicin, Berlin, 1895, Band xxvii., pp. 290–311.

[5] Carstairs C. Douglas: Some Observations on the Excretion of Uric Acid, with Special Reference to its Connexion with Leucocytosis, Edinburgh Medical and Surgical Journal, 1900, new series, vol. vii., pp. 32–42.

[6] G. Zarnier: Rapporto tra Leucocytosi ed Eliminazione di Acido Urico, Gazzetta degli Ospedali, Milano, 1896, vol. xvii., pp. 676–679.

[7] C. Giajmis: La Genesi dell' Acido Urico in Rapporto alle Sostanze Nucleiniche, Gazzetta degli Ospedali, Milano, 1898, vol. xix., pp. 545–547.

[8] E. Reale: Il Ricambio della Nucleina in Rapporto alla Genesi dell' Acido Urico ed alla Patologia delle Affezioni Uricemiche, Clinica Medica, Pisa, 1898, vol. iv., pp. 169–171, 185, 225.

[9] The Metabolism of the Nucleins under Physiological and Pathological Conditions, by T. H. Milroy, M.D., B.Sc., assistant to the professor of physiology, Edinburgh University, and J. Malcolm, M.B., Journal of Physiology, Supplement, 1898–99, also 1899–1900.

[10] Hale White and Hopkins: On the Excretion of Phosphorus and Nitrogen in Leukæmia, Journal of Physiology, 1899.

Now an increased destruction of the white cells means a diminution in the number of the old cells, the young cells either not diminishing at all, or at any rate not to a corresponding degree. Inasmuch as the polymorphonuclear neutrophiles—in this article I have adopted the classification of Cabot[11]—form by far the larger proportion of the white blood corpuscles in a healthy individual and are those concerned in ordinary leucocytosis, we will first consider them. Ehrlich's[12] view that the myelocyte and polymorphonuclear neutrophile represent different stages in the life history of one variety of cell, the myelocyte being the young cell, is generally accepted as correct. It is further probable that the small lymphocyte is quite distinct from these, being from first to last a small lymphocyte and nothing else, and that the large lymphocyte is, like the myelocyte, a young form of the polymorphonuclear neutrophile about the origin of which, however, we know less than in the case of the myelocyte. In examining a stained blood film from a case in which there is, or has recently been, a leucocytosis, forms intermediate in appearance between the myelocyte and the polymorphonuclear neutrophile are to be seen in varying numbers. The nucleus of one of these cells stains evenly and lightly; it is circular or oval or sometimes bilobed as if about to undergo division; moreover, at times not only the nucleus but the whole cell body is bilobed: the granules of the cell are similar to those of the polymorphonuclear neutrophile. Since all transition stages between the myelocyte and the polymorphonuclear neutrophile are represented by these cells it is clear that they are intermediate in age between these two varieties or are, in other words, simply young polymorphonuclear neutrophiles. Now if it be found as the result of observations made on two successive days that the polymorphonuclear neutrophiles are diminished in absolute number, the "young cells" (including the myelocytes) not being diminished or, at any rate, not being diminished to a corresponding degree, it may be assumed that a destruction of this form of white corpuscle has taken place. If, on the other hand, these show that whilst there has been a diminution in the absolute number of polymorphonuclear neutrophiles the number of the "young cells" is also markedly lessened, an increase in destruction of this variety of cell cannot be assumed, but rather a diminished production. In order to determine the absolute numbers of each variety of white corpuscle stained films were prepared and differential counts were made from specimens taken at the same time as those specimens from which the simple blood counts were made. By means of these differential counts one is thus able to obtain confirmatory evidence of the breaking down of the
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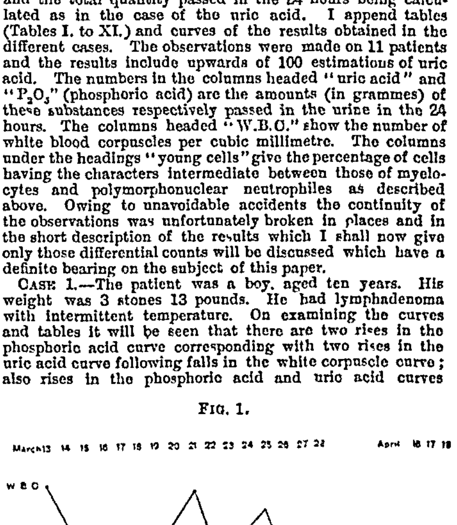
phosphoric acid.

From an examination of the results it will be seen that in 17 out of 20 instances in which an increased excretion of phosphoric acid follows a fall in the white blood corpuscle curve, pointing to an increased destruction of white corpuscles, there is associated with this increase a corresponding increase in the amount of uric acid excreted. In 13 instances there is confirmatory evidence of increased destruction of the white cells obtained from the differential counts, whilst in three instances this confirmation, owing to the absence of differential counts, could not be obtained. In five instances the examination of the differential counts gave a directly opposite interpretation to the study of the white corpuscle and phosphoric acid curves, the one pointing to increased destruction and the other not. Most of the observations were on cases of advanced pulmonary tuberculosis; in these we may fairly assume, as Haig[13] has pointed out, that there is no retention of uric acid within the body. If we carefully examine the curves we shall see that in those cases in which there are great and sudden variations in the number of white cells, there are also great and sudden variations in the amounts of uric acid and phosphoric acid excreted. This tends to confirm the theory that uric acid is derived from the white corpuscles (compare, for instance, Cases 1 and 5, on the one hand, with the earlier observations on Cases 10 and 11 on the other). It will also be observed that in the case of the three children (Cases 1, 2, and 3) there is, relatively to the body-weight, more uric acid and phosphoric acid excreted than in the case of the adults. This may be explained by assuming a more rapid destruction of the white cells in the former case than in the latter. This is confirmed by reference to the curves, when we find that the rise of uric acid and phosphoric acid follows more closely on the fall of the white corpuscle curve than in the case of the adults.

As regards methods, the white blood corpuscle counts were made by the Thoma Zeiss hæmacytometer, the diluting solution used being a ½ per cent. solution of acetic acid in water coloured by gentian violet; the differential counts were made from films fixed by heat and stained by a modification of Ehrlich's triacid stain. The uric acid was estimated by Hopkins's method (by Folin's modification in Case 9). 100 cubic centimetres of urine were used for each estimation and the total quantity passed in the 24 hours being measured the total quantity of uric acid passed in the 24 hours was thus calculated. The phosphoric acid was estimated by means of the volumetric method with uranium nitrate, 50 cubic centimetres of urine being used for each estimation and the total quantity passed in the 24 hours being calculated as in the case of the uric acid. I append tables (Tables I. to XI.) and curves of the results obtained in the different cases. The observations were made on 11 patients and the results include upwards of 100 estimations of uric acid. The numbers in the columns headed "uric acid" and "P_2O_5" (phosphoric acid) are the amounts (in grammes) of these substances respectively passed in the urine in the 24 hours. The columns headed "W.B.C." show the number of white blood corpuscles per cubic millimetre. The columns under the headings "young cells" give the percentage of cells having the characters intermediate between those of myelocytes and polymorphonuclear neutrophiles as described above. Owing to unavoidable accidents the continuity of the observations was unfortunately broken in places and in the short description of the results which I shall now give only those differential counts will be discussed which have a definite bearing on the subject of this paper.

CASE 1.—The patient was a boy, aged ten years. His weight was 3 stones 13 pounds. He had lymphadenoma with intermittent temperature. On examining the curves and tables it will be seen that there are two rises in the phosphoric acid curve corresponding with two rises in the uric acid curve following falls in the white corpuscle curve; also rises in the phosphoric acid and uric acid curves corresponding with a fall in the white corpuscle curve. From a study of the differential counts (Table I.) we find evidence of breaking down (increased destruction) of the white cells between March 15th and 16th, 22nd and 23rd,

FIG. 1.



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[11] Cabot: Clinical Examination of the Blood.

[12] Ehrlich and Lazarus: Histology of the Blood, translated by W. Myers, Chap. II.

[13] Haig: Uric Acid as a Factor in the Causation of Disease.

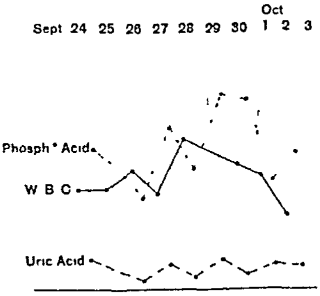
TABLE I.—*Case 1.*

Date.	P_2O_5 in grammes.	Uric acid in grammes.	W.B.C.	Differential counts. Polymorphonuclear neutrophiles.	Lymphocytes. Large.	Lymphocytes. Small	"Young cells."	Myelocytes.	Eosinophiles.
				Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
March 13th	—	—	22280	—	—	—	—	—	—
,, 14th	—	—	17250	75·19	14·07	4·20	3·75	1·49	1·29
,, 15th	0·42	0·18	13200	72·72	18·19	3·86	3·40	0·71	1·10
,, 16th	0·25	0·21	11800	71·38	19·02	3·10	4·37	0·54	1·55
,, 17th	0 94	0·36	—	—	—	—	—	—	—
,, 18th	0 62	0·33	12900	78·46	14·73	3·15	2 43	0·14	1·05
,, 19th	0·52	0·21	13500	74·82	13·54	5·19	4·20	0·75	1·48
,, 20th	0·76	0·30	—	—	—	—	—	—	—
,, 21st	1·47	0·40	21330	79·38	5·63	6·76	6·44	0·48	1·28
,, 22nd	0·62	0·21	14500	74·47	14·01	7·53	2·71	0·62	0·62
,, 23rd	0·31	0 08	13950	68·89	10·84	13·07	5·90	0·31	0·95
,, 24th	1·01	0·47	—	—	—	—	—	—	—
,, 25th	0·47	0·15	18640	65·91	13·81	16·78	3·14	0·18	0·18
,, 26th	0·85	0·22	12150	75·66	8·05	13·85	0.93	0·	1·49
,, 27th	—	0·21	13600	66·08	12 65	14·93	3·86	0·0	2·46
,, 28th	—	0 094	11930	—	—	—	—	—	—
April 16th	0·59	0·19	6260	71·23	7·79	16·63	0·0	0·0	4·33
,, 17th	0·80	0·25	5630	71·38	5·20	14·14	5 04	0·0	4·22
,, 18th	1·02	0·29	—	—	—	—	—	—	—

and finally April 16th and 17th, such evidence being, as I stated above, a decrease in the absolute number of polymorphonuclear neutrophiles, whilst the number of the myelocytes and young cells remains the same or even increases. These three occasions correspond with the three above-mentioned falls in the white corpuscle curve.

CASE 2.—The patient was a boy, aged seven years. He weighed 2 stones 10 pounds. He had chronic pulmonary tuberculosis and pyuria. There are seen to be marked rises of the phosphoric acid and uric acid curves (on Sept. 27th and 29th) respectively following falls in the white corpuscle curve. Following the last fall in the white corpuscle curve is a rise in the phosphoric acid curve but not in the uric acid curve. From the differential counts (Table II.) there is evidence of breaking down of the white corpuscles between Sept. 26th and 27th, also between Sept. 30th and Oct. 1st, or in two out of the three instances in which a study of the three curves points to increased destruction of the white cells. Between Sept. 28th and 29th no differential counts were made.

FIG. 2.



CASE 3.—The patient was a male, aged seven years. His weight was 3 stones. He was suffering from chronic pulmonary tuberculosis. Here we find two rises in the phosphoric acid and uric acid curves immediately following falls in the white corpuscle curve. From examination of the differential counts (Table III.) there is evidence of increased destruction between Oct. 11th and 12th corresponding to one of these two falls. Between Oct. 16th and 17th, corresponding to the other white corpuscle fall, there is no evidence of increased destruction from the differential counts, except, perhaps, in regard to the small lymphocytes.

TABLE II.—*Case 2.*

Date.	P_2O_5 in grammes.	Uric acid in grammes.	W.B.C.	Differential counts. Polymorphonuclear neutrophiles.	Lymphocytes. Large.	Lymphocytes. Small.	"Young cells."	Myelocytes.	Eosinophiles.
				Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Sept. 24th	1·37	0·30	9690	56 24	10 26	27·48	1·42	0 0	4 58
,, 25th	1·18	0·17	9700	62·43	7·85	24·00	1·71	0 0	4 00
,, 26th	0·89	0·088	11560	55·64	12·39	25·65	2·33	0·14	3·93
,, 27th	1·56	0·24	9200	53·38	4·769	34·00	1·69	2·30	3·84
,, 28th	1·18	0·12	14600	66·24	10 58	19·89	0·91	0 0	2·37
,, 29th	1·90	0·28	—	—	—	—	—	—	—
,, 30th	1·85	0·13	12200	57·34	7·48	30·36	1·55	0 0	3·25
Oct. 1st	1·08	0·23	11000	60·70	7·44	26·78	1 74	0 0	3·33
,, 2nd	1·35	0·22	7100	54·59	7·08	31·56	1·28	0 48	4 99

FIG. 3.

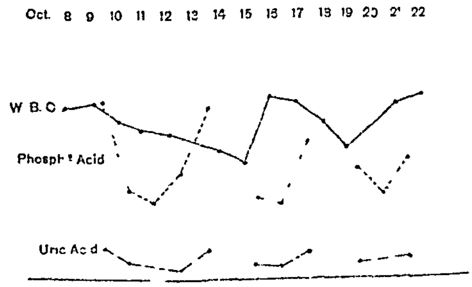
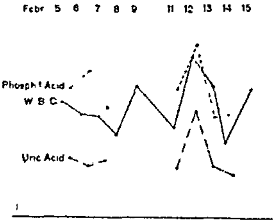


TABLE III.—*Case 3.*

Date.	P_2O_5 in grammes.	Uric acid in grammes.	W.B.C.	Differential counts. Polymorphonuclear neutrophiles.	Lymphocytes. Large.	Lymphocytes. Small.	"Young cells."	Myelocytes.	Eosinophiles.
				Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Oct. 8th	—	—	16460	—	—	—	—	—	—
,, 9th	—	—	16830	49 93	8·37	37·96	1·94	0·0	1·79
,, 10th	1·7012	0·30	15150	51·67	8·29	38·11	0 63	0·0	1·27
,, 11th	0·87	0·15	14400	53·34	8·47	35·36	1·33	0·0	1·48
,, 12th	0·75	0·12	14000	45·78	8·44	43·18	2·04	0·0	0 54
,, 13th	1·01	0·094	—	—	—	—	—	—	—
,, 14th	1·57	0·25	12430	60·74	3·23	33·67	0·44	0·0	1·91
,, 15th	—	—	11250	50·60	9·07	37·90	2·01	0 0	0 40
,, 16th	0·79	0·13	17400	55·73	5·57	35·98	1·43	0·0	1 27
,, 17th	0·72	0·11	17000	67 44	2·54	27·25	0 69	0 0	2·07
,, 18th	1·29	0 25	15130	61·82	9·23	27·83	0 0	0 0	1·11
,, 19th	—	—	*12530*	*57·14*	*6·10*	*33 92*	1·78	0 0	1·04
,, 20th	1·06	0·15	—	—	—	—	—	—	—
,, 21st	0·81	0·17	16700	60 00	6·40	36·62	2·03	0·0	0 93
,, 22nd	1·13	0·20	17500	60·19	6·47	30·42	1·13	0·16	1·61

CASE 4.—The patient was a male, aged 20 years. He was suffering from caseous pulmonary tuberculosis. He died on Feb. 16th. In this case we find marked rises in the phosphoric acid and uric acid curves following one fall in the

FIG. 4.



white corpuscle curve (between Feb. 9th and 11th). Unfortunately, no differential counts were made between Feb. 9th and 11th. (Table IV.)

TABLE IV.—*Case 4.*

Date.	P_2O_5 in grammes.	Uric acid in grammes.	W.B.C.	Differential counts. Polymorpho-nuclear neutrophiles	Lymphocytes. Large.	Lymphocytes. Small.	"Young cells."	Myelocytes.	Eosinophiles.
				Per cent.	Per cent.	Per cent.	Per cent	Per cent	Per cent.
Feb. 5th	—	—	15200	79 75	4 63	8 96	6 02	0 15	0 46
„ 6th	1·70	0 77	13600	85 78	4·47	7·18	2 07	0 0	0 48
„ 7th	1 93	0 67	13400	77 21	5 84	10 54	5 41	0 99	0 0
„ 8th	1 44	0·76	10850	80 91	4 56	10 64	3 54	0 17	0 17
„ 9th	—	—	17380	75 48	2·45	12 25	9 10	0·17	0 52
„ 10th	—	—	—	—	—	—	—	—	—
„ 11th	—	—	12050	—	—	—	—	—	—
„ 12th	1·70	0 65	21500	85 52	4 25	8 51	1 53	0 17	0 10
„ 13th	2 30	1·42	17500	84·21	5 08	8 42	1 93	0 35	0 0
„ 14th	1·34	0 67	9600	87·46	4·12	5 44	2 80	0 16	0 0
„ 15th	1·38	0 56	17000	86 05	3·26	7 78	2 71	0 18	0 0

CASE 5.—The patient was a male, aged 21 years, suffering from caseous pulmonary tuberculosis. He died on June 30th. On examining the table (Table V.) and curves we see two well-marked rises in the phosphoric acid and uric acid curves following falls in the white corpuscle curve, also a slight rise of each following a fall in the white corpuscle curve. In only one instance is confirmatory evidence of increased destruction to be obtained from the differential counts—viz., between May 16th and 17th. Between May 20th and 21st and 22nd and 23rd there is no confirmatory evidence of increased destruction.

FIG. 5.

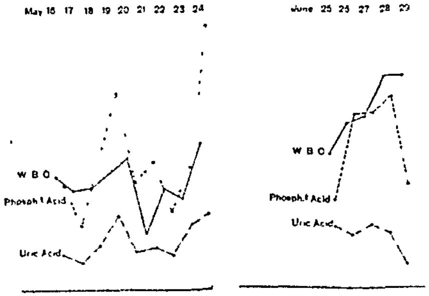
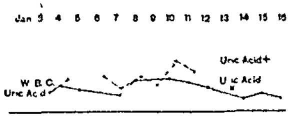


TABLE V.—*Case 5.*

Date.	P_2O_5 in grammes.	Uric acid in grammes.	W.B.C.	Differential counts. Polymorpho-nuclear neutrophiles	Lymphocytes. Large.	Lymphocytes. Small.	"Young cells."	Myelocytes.	Eosinophiles.
				Per cent.	Per cent	Per cent	Per cent.	Per cent.	Per cent.
May 16th	1·49	0 49	15700	83 93	6·15	3·96	4 16	1·38	0·40
„ 17th	0 89	0·38	13580	79 51	6·20	7 51	5·07	0 75	0·94
„ 18th	1 82	0 62	14100	80 07	5 71	6 23	6 75	0·17	0 69 (also basophiles 0·35)
„ 19th	2 74	1·04	—	—	—	—	—	—	—
„ 20th	1·49	0 54	18300	81·44	5·30	8 90	2 08	0 57	1 51 (also basophiles 19)
„ 21st	1·77	0 59	7900	85·74	3 61	6 22	2 61	0 20	1·60
„ 22nd	1·08	0 49	14000	78 92	5 23	8·24	6 02	0·31	1·27
„ 23rd	1·69	0 89	12570	81·62	6 35	9 62	1·20	0 17	1·03
„ 24th	3 62	1·05	20270	80 25	6 87	4 93	5 99	1·23	0 71
„ 25th	—	—	—	—	—	—	—	—	—
June 25th	1 22	0 85	18500	90 71	3 48	2 65	1·16	1 99	0 0
„ 26th	2 40	0 74	22800	85 55	1·82	2 82	6 64	3 15	0 0
„ 27th	2 44	0 87	23800	87·07	1·30	3 60	4 41	3 60	0 0
„ 28th	2 66	0·77	29250	88 87	4 17	2 26	2 60	2 08	0 0
„ 29th	1 42	0·34	29500	—	—	—	—	—	—

CASE 6.—The patient was a female, aged 21 years, suffering from caseous and miliary pulmonary tuberculosis. Unfortunately, no estimations of phosphoric acid and no continuous differential counts were made in this case. It may be noted, however, that after each fall in the white corpuscle curve there is a rise in the uric acid curve, the most marked rise (that between Jan 13th and 15th) occurring after the longest and most marked fall in the blood corpuscle curve. The low white corpuscle counts in this case should be noted. (Table VI.)

FIG. 6.



The marks + × represent readings of uric acid.

TABLE VI.—*Case 6.*

Date.	Uric acid in grammes.	W.B C.	Date	Uric acid in grammes.	W.B C.
Jan. 4th	0 29	3600	Jan. 11th	0 71	4111
„ 5th	0 47	3166	„ 12th	0·55	3400
„ 6th	—	—	„ 13th	—	—
„ 7th	0 49	2400	„ 14th	0 30	1000
„ 8th	0 33	4300	„ 15th	—	2500
„ 9th	0·49	—	„ 16th	0 70	1750
„ 10th	0 37	4600			

CASE 7.—The patient was a female, aged 30 years, suffering from caseous and miliary pulmonary tuberculosis. Here we see that after the fall in the white blood count between

Oct. 28th and 29th there are marked rises in the curves of phosphoric acid and uric acid. No confirmatory evidence of increased destruction is obtainable from the differential counts between Oct. 28th and 29th. (Table VII.)

FIG. 7.

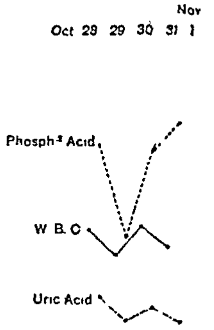
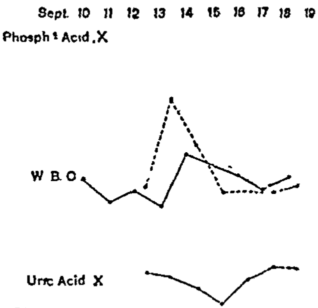


TABLE VII.—*Case 7.*

Date.	P_2O_5 in grammes.	Uric acid in grammes.	W.B.C.	Differential counts.					
				Polymorpho-nuclear neutrophiles.	Lympho-cytes. Large.	Lympho-cytes. Small.	"Young cells."	Myelocytes.	Eosinophiles.
				Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Oct. 28th	1·97	0 53	11700	70 54	6·84	19·42	1·75	0·0	1·43
„ 29th	1·11	0·31	9300	73·28	4·92	19·70	0·59	0·0	1·49
„ 30th	1·93	0·44	12100	60·86	4·46	29·58	4·16	0·15	0·77
„ 31st	2·18	0·30	10130	68·30	8·92	17·26	2·52	0·59	2·38
Nov. 1st	—	—	—	—	—	—	—	—	—

CASE 8.—The patient was a male, aged 21 years, suffering from caseous pulmonary tuberculosis. Here there is nothing in confirmation of the theory that uric acid is produced by the destruction of the white blood corpuscles. There are two rises in the phosphoric acid curve following falls in the blood corpuscle curve between Sept. 10th and 11th and Sept. 16th and 17th respectively, but neither of them corresponds with a rise in the uric acid curve. From the differential counts we find that there is evidence of increased destruction of the white cells between Sept. 10th and 11th, 12th and 13th, and finally 16th and 17th. (Table VIII.) The first and last of these three occasions correspond then to the two periods of increased destruction as shown by the white corpuscle and phosphoric acid curves; in the second case, however, there is no succeeding rise in the phosphoric acid curve and therefore no other evidence of increased destruction.

FIG. 8.



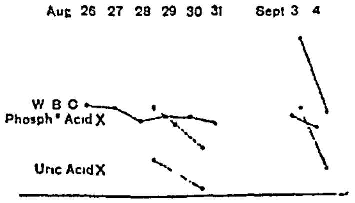
The marks × represent readings of uric and phosphoric acid.

TABLE VIII.—*Case 8.*

Date.	P_2O_5 in grammes.	Uric acid in grammes.	W. B. C.	Differential counts.					
				Polymorpho-nuclear neutrophiles.	Lympho-cytes. Large.	Lympho-cytes. Small.	"Young cells."	Myelocytes.	Eosinophiles.
				Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Sept. 10th	—	—	12830	81·11	3·22	10 44	3·99	0·76	0 46
„ 11th	2·65	0·28	10600	76 43	6 56	10·77	4·37	0 67	1·17
„ 12th	—	—	11900	80 95	5·39	8·73	2·38	0·16	2 38
„ 13th	1·22	0·37	10300	80 20	3·49	6 84	7·42	0·43	1·60
„ 14th	2·09	0·35	15500	82·82	4·42	8·33	1·87	0·17	2·38
„ 15th	1·62	0·24	—	—	—	—	—	—	—
„ 16th	1·18	0 07	13400	83·12	5·34	5·62	3·89	0·14	1 87
„ 17th	1·18	0·30	12000	81·95	3·41	7·31	3·90	0·32	3·08
„ 18th	1·17	0·43	13150	84·87	3·81	8 81	0·39	0·0	2·11
„ 19th	1 24	0 41	—	—	—	—	—	—	—

CASE 9.—The patient was a male, aged 40 years, suffering from chronic pulmonary tuberculosis. In this case it is probable that a rise in the phosphoric acid and uric acid curves occurred soon after the 31st inst., following a slight fall in the white corpuscle curve. There is evidence of increased destruction from the differential counts between August 29th and 30th. (Table IX.) Here there is little evidence either for or against the theory.

FIG. 9.



The marks × represent readings of uric and phosphoric acid.

TABLE IX.—*Case 9.*

Date.	P_2O_5 in grammes.	Uric acid in grammes.	W. B. C.	Differential counts.					
				Polymorpho-nuclear neutrophiles.	Lympho-cytes. Large.	Lympho-cytes. Small.	"Young cells."	Myelocytes.	Eosinophiles.
				Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
August 26th	0·75	0·27	8750	62·55	5·92	28·12	2·01	0 0	1·38
„ 27th	—	—	8550	63 82	8·68	24·89	0·57	0 0	2 02
„ 28th	—	—	7400	64·99	3·34	25·41	2·73	0·30	3·19
„ 29th	0·86	0·35	7830	67·00	7·96	21·41	1·73	0·14	1·73
„ 30th	0·69	0·22	7600	63·94	3 91	27·55	2·89	0 0	1·70
„ 31st	0·46	0·064	7150	61·72	6·43	28·21	1·32	0·49	1·81
Sept. 3rd	—	—	7750	57·83	8·02	27·13	4·45	0·13	2·42
„ 4th	1·51	0·86	6500	64·73	5·64	25·23	2·19	0 0	2·19
„ 5th	0·83	0·25	—	—	—	—	—	—	—

CASE 10.—The patient was a male, aged 62 years, suffering from chronic pulmonary tuberculosis, bronchitis, and emphysema. Here we see two rises in the phosphoric acid and uric acid curves, slight ones on Nov. 13th and very marked ones on Nov. 16th, following two falls in the white corpuscle curves. From a study of the differential counts we obtain confirmatory evidence of increased destruction of the white

corpuscles between Nov. 12th and 13th, corresponding to the first of these occasions Corresponding to the second there is no confirmatory evidence, seeing that no differential count was made either on Nov 14th or 15th (Table X.)

FIG 10.

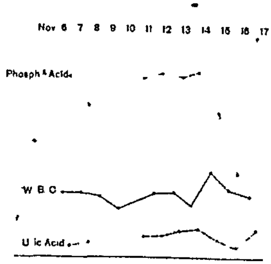
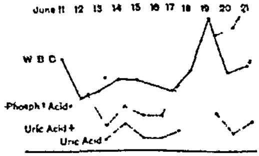


TABLE X —*Case 10*

Date	P_2O_5 in grammes	Uric acid in grammes	W B C	Differential counts						
				Polymorpho-nuclear neutrophiles	Lymphocytes		"Young cells"	Myelocytes	Eosinophiles	Basophiles
					Large	Small				
				Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
Nov. 6th	2 43	0 17	8700	65 74	6 06	22 95	1 80	0 16	2 78	0 49
„ 7th	—	—	8830	54 96	6 2	28 89	5 38	0 0	3 96	0 56
„ 8th	2 03	0 21	8150	—	—	—	—	—	—	—
„ 9th	—	—	6550	63 91	5 15	25 15	2 06	0 21	3 29	0 21
„ 10th	2 41	0 29	—	—	—	—	—	—	—	—
„ 11th	2 48	0 30	8700	66 62	5·07	22 76	2 15	0 0	2·77	0 61
„ 12th	2 42	0 35	8820	64 64	4 70	24 73	2 73	0 0	2 88	0 30
„ 13th	2 50	0·39	7020	62 37	5 30	26 67	2 47	0 0	2 82	0 35
„ 14th	1 94	0 24	11450	—	—	—	—	—	—	—
„ 15th	1 12	0 15	9050	—	—	—	—	—	—	—
„ 16th	2·94	0 36	8360	66 36	3 69	24 58	2 40	0 0	2 58	0 36
„ 17th	—	—	—	—	—	—	—	—	—	—

CASE 11 —The patient was a female, aged 42 years She was suffering probably from a new growth of the mediastinum. She died on June 22nd In this case there are three corresponding rises in the phosphoric acid and uric acid curves following respectively three falls in the white blood corpuscle curve There is, corresponding to these three occasions, confirmatory evidence of increased destruction of the white blood corpuscles between June 11th and 12th, 14th and 15th, and finally between the 19th and 20th. (Table XI)

FIG 11



The mark + represents a reading of phosphoric acid

To Dr. Eustace Smith and to my colleagues at the City of London Hospital for Diseases of the Chest, Victoria Park, Dr G A. Heron, Dr E C Beale, Dr. H. Sainsbury, Dr T Glover Lyon, and Sir Hugh Beevor, I am indebted for permission to use the results obtained from cases under their care

Upper Berkeley street, W

TABLE XI —*Case 11*

Date	P_2O_5 in grammes	Uric acid in grammes	W B C	Differential counts					
				Polymorpho-nuclear neutrophiles	Lymphocytes		"Young cells"	Myelocytes	Eosinophiles
					Large	Small			
				Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
June 11th	—	—	12700	51 97	11 21	31 43	0 79	0 16	4 42
„ 12th	0·64	0·27	7300	58 81	7 05	30 79	1 48	0 0	1 85
„ 13th	0 79	—	8300	54 24	5 59	34 06	1 35	0 0	4 74
„ 14th	0 34	0 17	9900	55 89	11 77	26 36	2 81	0 0	3 15
„ 15th	0 63	0 38	9760	52 04	16 83	23·97	2 89	0 17	4·08
„ 16th	0 49 (mean of two days)	0 17 (mean of two days)	—	—	—	—	—	—	—
„ 17th	0 49 (mean of two days)	0 17 (mean of two days)	8160	64 24	4 23	24 40	1 69	0 34	5 08
	0 93	0 29	—	—	—	—	—	—	—
„ 18th	—	—	11050	67 35	5 33	25 27	0 15	0 0	1 88
„ 19th			18300	68 12	12 07	14 97	3 22	0 16	1 45
„ 20th	1 59	0 54	10700	70 33	12 12	11 80	3 82	1·27	0 48
„ 21st	1 70	0 24	11600	69 32	10 41	15 72	2 65	1 13	0 76
„ 22nd	2 11	0 39	—	—	—	—	—	—	—

A FORM OF REMOVEABLE DEEP SUTURE.

BY F. R S MILTON, M R C S ENG, L R C P. LOND,
PROFESSOR OF CLINICAL SURGERY AT THE MEDICAL SCHOOL CAIRO, SURGEON TO, AND SURGEON IN CHARGE OF GYNÆCOLOGICAL WARDS AT, THE KASR EL-AINI HOSPITAL, CAIRO

ALTHOUGH an aseptic buried suture should remain buried and never be heard of further, still it does sometimes happen that such a suture will, after a time, make its presence known by causing the formation of a pustule to be followed by a sinus which will not heal until the offending stitch has been removed This may happen after the completely aseptic healing of the original wound and even after every precaution has been taken in the preparation of the suture material This reappearance of the suture is always a cause of annoyance to the patient and of heart searching to the surgeon and, if a continuous suture has been used, as for instance, in the peritoneal suture after abdominal section, may necessitate the performance of an operation involving the opening up of the whole original wound. In order to get over this difficulty it is necessary to devise some form of suturing in which the deep suture, although practically buried, may still be removed at any period after the healing of the wound Again, after many operations, such as those involving suturing at the bottom of cavities, such as in the vagina for vesico-vaginal fistulæ or in colporrhaphy, the patient has to undergo what may cause her almost more suffering than the original operation when the time comes for removing the stitches, and here again the use of an easily removeable suture would be of immense advantage both to the surgeon and to the patient.

It is evident that to be capable of removal at a period subsequent to complete inclosure in a healed wound, any suture of more than a single point must be a continuous one and the form of continuous suture most easily removed by a single application of force would seem to be that which is commonly known as the ordinary machine chain stitch and in order to make use of this it is only necessary to employ a form of needle which will take the entering and returning thread through the same hole This, then, was the first form of stitch which I experimented with. In working this out on inanimate objects it answered perfectly well, but when it came to applying it to the living subject it was found that during the process of healing in the wound the chain got, as it were, fouled by the uniting tissue and the stitch would not pull out easily. Being dissatisfied with this I then tried the other form of sewing-machine or "lock" stitch, and this was found quite satisfactory and perfectly easy of removal provided certain points in its application were attended to.

In the ordinary sewing-machine the efficiency and neatness of the stitching depend upon preserving the ratio between the tensions of the two threads employed. If the tension is properly regulated the interlocking of the threads will take place in the substance of the material under suture, whereas if the tension of one of the threads be greater than that of the other the interlocking of the threads will take place on the surface of the material and on the side of the thread with the highest tension. By using two threads with different pliability in surgical suturing the same effect can be produced as would be caused by extreme difference in the tension in machining; thus, if one thread be of silk and the other of, say, stiff steel wire it is obvious that instead of the threads interlocking in the substance of the material they will hardly interlock at all, but the more pliable silk will simply pass round the stiff wire and the turns will all be on the side of the material to which the wire is applied, and, further, it will be found that on pulling the wire this can be easily withdrawn and in consequence the silk, having lost its support, can also be withdrawn with the slightest pull.

The method of introducing the suture is of the simplest. All that is required is a mounted needle with an eye near the point; through this is threaded a long piece of silk. This forms the primary thread; the secondary thread is best formed by a stout piece of silkworm-gut which is sufficiently rigid to avoid kinking and being drawn into the sutured tissue. Supposing the peritoneum is to be sutured after a laparotomy the procedure will be as follows:—The two layers of the peritoneum which are to be sewn together are defined; the mounted needle, threaded, with the long end of the thread on the left hand or upper side of the needle when held as it will be when piercing the tissue, is passed from the operator through both layers of the peritoneum, beginning at the lower angle of the wound. The needle is then withdrawn, leaving a loop of silk protruding through the layers of peritoneum on the side of the assistant; through this loop the assistant passes the end of the silkworm-gut, from below upwards, and the loop is withdrawn flush with the assistant's side of the united flaps. The needle, not having been unthreaded, is again thrust through the flaps for the second stitch and again withdrawn, leaving a loop as in the first instance; the silkworm-gut is threaded through this second loop and the process is repeated till the whole of the flaps are united; these being held together by a series of silk loops, the primary thread, held in position by the secondary thread of silkworm-gut passing through the loops on the assistant's side. The needle is next unthreaded, leaving a fairly long end to the silk. There will be now on the face of the wound, on the side of the surgeon, the two ends of silk, one entering the peritoneal flaps at the lower end of the wound and the other leaving the peritoneum at the upper end, and on the side of the assistant the silkworm-gut thread passing through the silk loops and also with long ends, one at the lower end of the wound and the other at the upper end. The silkworm-gut thread should now be put on the stretch and pulled gently backwards and forwards to see that it is nowhere kinked and that it can be withdrawn. This having been done, the four ends, two silk and two silkworm-gut, are each in turn threaded on an ordinary needle and made to pierce the skin on its own side of the wound and are left thus whilst the wound in the abdominal wall is sutured in the ordinary way. This having been done the two lower ends of the peritoneal suture, being one of silk and the other of silkworm-gut, are then tied together and cut to a convenient length. The same is done with the two ends at the upper end of the wound and the process is complete.

When it is required to remove the deep stitch, which may be any time after the wound is healed, all that is required is to cut the lower united stitches on the silk side of the knot *and the upper stitch on the gut side of the knot, or vice versâ*, and to pull out first the silkworm-gut stitch which will offer no resistance, and then the silk stitch which having lost its support can be pulled out with equal facility.

The suturing itself can be done quite as rapidly as the ordinary continued suture and the only point requiring special attention is not to pull the silk loops so tight that they drag the silkworm-gut thread into the stitch hole or on to the silk side of the wound.

The method is applicable to any form of buried suture which it may be desirable to remove after healing, except that if the suturing has to take a curve of more than about a sextant two or more separate silkworm gut threads will have to be used in following the curve; otherwise, if the one thread has to curve round too great a part of a circle it will be found to drag on the loops on an attempt at withdrawal and will not run.

There would appear to be no limit, in reason, to the time that the suture may be left in position without causing trouble, provided the part be kept aseptic; thus, in cases of radical cure of hernia I have kept the stitches closing the ring in position for 15 days without any sign of suppuration or irritation and with no indication that such was likely to occur, and at the end of that time have removed the stitches without the slightest difficulty.

Up to the present I have employed the stitch in cases of laparotomy, in radical cure of hernia, in suprapubic cystotomy, for suturing the pleura in cases of abscess of the liver, and in colporrhaphy, and have found it to answer very well.

Cairo.

A CASE OF TYPHOID PANCREATITIS.

BY B. G. A. MOYNIHAN, M.S. LOND., F.R.C.S. ENG.,
SENIOR ASSISTANT SURGEON TO THE LEEDS GENERAL INFIRMARY; CONSULTING SURGEON TO THE SKIPTON HOSPITAL AND TO THE MIRFIELD MEMORIAL HOSPITAL.

IT has been generally recognised, since Riedel in 1892 first drew attention to the fact, that chronic pancreatitis is not infrequently dependent upon the irritation of gall-stone disease. The constantly recurring attacks of cholangitis aroused by the passing of a stone down the cystic and common ducts, the impaction of a stone in the lower end of the common duct, and especially its lodgment in the ampulla of Vater, may all be the determining causes of a chronic inflammation of the pancreas.

Among causes other than gall-stones which are capable of originating an acute inflammation of any part of the bile passages typhoid fever, as shown by Murchison, Keen, and many others, takes a prominent place. The bacillus typhosus may be found in the bile for many months or even years after an attack of typhoid fever. In one case a pure culture of the organism was obtained from the bile in the gall-bladder after seven years. Since the common bile-duct and the duct of the pancreas have a common opening into the duodenum at the ampulla of Vater it is not difficult to understand how an ascending infection attacking the bile passages may also affect the canal of Wirsung. In the following case there was a condition of typhoid pancreatitis associated with an infection of the gall-bladder by the bacillus typhosus.

The patient, a boy, aged 13 years, who was sent to me by Dr. W. A. H. Waite of Leeds, was admitted to the Leeds General Infirmary on March 2nd, 1903. The history of the case was that he had been in his usual good health up to September, 1901. In that month he had typhoid fever, from which he made a slow but satisfactory recovery. At frequent intervals since his convalescence he complained of attacks of pain in the upper part of the abdomen. When asked to point out the seat of the most severe pain he laid his hand across the epigastrium. The pain on several occasions had lasted for three or four hours and had been accompanied by feelings of nausea and, though rarely, by vomiting. In November, 1902, for the first time such an attack was followed by jaundice which lasted for several days and then gradually cleared away. Almost every week since November similar attacks of pain, varying in intensity, had occurred and the jaundice had deepened slightly after each attack. The jaundice had never cleared away completely, though it had varied much in depth of tinge. There had never been *any elevation of temperature when the pain* had come and there had been neither shivering nor flushing. For the last three months the appetite had been poor and the boy had become considerably emaciated.

On examination of the abdomen there was distinct tenderness in all the region above the level of the umbilicus Nothing abnormal could be felt A diagnosis of typhoid infection of the gall bladder, probably resulting in gall stones one of which had stayed in the common duct, was made On March 6th the abdomen was opened The gall bladder contained bile but no stones There were no adhesions around the bladder or the bile ducts There was no stone in any part of the bile passages The cause of the jaundice was found in the pancreas The head and much of the body of the pancreas were found to be at least twice as large as the normal and almost as hard as stone I have never felt even in old standing cases of chronic indurating pancreatitis a gland so intensely hard as this was The common duct was obviously buried in a mass of densely hard inflammatory material in the head of the pancreas The gall-bladder was aspirated and about half an ounce of bile was withdrawn into a sterilised vessel A drainage tube was sutured into the gall bladder and the abdominal wound was closed in the usual way The bile was handed over to Dr J A. Cairns Forsyth for examination His report read as follows —

> An agar tube was inoculated with the bile The resulting growth was examined and found to be composed of bacilli resembling the bacillus coli or the bacillus typhosus The bacilli had the following properties (1) *in fluid gelatin they cause a uniform turbidity without* the formation of any flocculi (2) they do not coagulate or curdle milk and (3) they do not produce an acid reaction on litmus agar The organisms are therefore typhoid bacilli

Dr Forsyth then examined the blood for Widal's reaction and reported as follows —

> The serum gave a positive reaction—1 in 20 instantaneously, 1 in 60 in ten minutes and 1 in 100 in 40 minutes.

The gall bladder was drained for four weeks Recovery was uninterrupted and in all respects most satisfactory

This case is, so far as I can ascertain, the first in which an inflammation of the pancreas due to typhoid fever has been recognised I have operated now upon 13 cases of chronic pancreatitis, but in no instance have I observed so gross an alteration in the size and consistence of the gland At the end of three weeks the bile discharged from the gall bladder was examined by Dr Forsyth and was found to contain very large numbers of typhoid bacilli I then ordered urotropine in ten grain doses thrice daily, the dose being increased to 15 grains four days later On the eleventh day after the commencement of the giving of the drug the bile was again examined and was found to contain no typhoid organisms, only "a few cocci "

Leeds

SOME OBSERVATIONS ON MOVEABLE KIDNEY[1]

BY T E GORDON, M B DUB, F R C S IREL,

SURGEON TO THE ADELAIDE HOSPITAL DUBLIN

I WISH in this communication to draw attention to some points of interest relative to moveable kidney and to show the conclusions to which I have come I have seen very many cases of this condition and I have notes of 12 cases in which I performed a fixation operation Of these 12 cases all the patients were women except one who was a young man In all of these cases I operated by the same method—i e, that recommended by Morris—with one modification In all the result was aseptic I do not think permanent complete fixation has been the rule but, as Edebohls has pointed out, a certain degree of return of mobility is not inconsistent with perfect success as regards the relief of symptoms

It is now well recognised that moveable kidney is a cause of various and diverse symptoms—that it may induce vomiting and other gastric manifestations jaundice and hepatic colic or symptoms which belong to the kidney itself, and that it may be associated with a neurasthenic condition With such diversity of symptoms it can readily be understood that moveable kidney is a common cause of mistaken diagnosis Sometimes cases of moveable kidney are mistaken for something else—e g, those in which vomiting occurs are supposed to be cases of gastric ulcer or those with jaundice to be cases of gall stones On the other hand, symptoms due to something else may be supposed to be due to moveable kidney and this kind of mistake is apt to be attended with serious consequences, as in a case to which I must refer in some detail presently There are two facts which when fully realised ought to safeguard one against both classes of error to some extent First it should be remembered that moveable kidney is of exceedingly common occurrence and often is the sole cause of some of those symptoms to which I have alluded. In the second place, it should still more carefully be borne in mind that the moveable kidney, whatever degree of mobility it may possess, may be a cause of no symptoms

We may conveniently arrange these cases of moveable kidney which cause symptoms into certain groups as follows (1) those with slight discomfort, such as a dragging sensation and associated with vague general ill health, with or without hysterical manifestations, (2) those in which the symptoms are of the gastro intestinal type, (3) those with hepatic symptoms, and (4) those having distinctly renal symptoms I think that the last must be very uncommon At all events, I have not met with a single case and I will not therefore allude to them further

Those cases of the first group with hysterical symptoms present special difficulties Hysterical women often have a moveable kidney, they are often unaware of this and have no symptoms referable to it In these circumstances it is obviously a folly to advise nephropexy or, indeed to make the patient aware that her kidney is moveable. If, however, she is made aware one way or another that she has a moveable kidney an operation *may* do good I have had one remarkable success in the case of a woman of this class

CASE 1 —The patient was emaciated, complained of pain and fulness after eating, was much constipated, and was quite unfit for work She was Dr H. T. Bewley's patient and having fruitlessly tried ordinary remedies he handed her over to my care I fixed her kidney in January, 1901, kept her in bed for six weeks, and had her massaged during part of this time and well fed I saw her again about six months after the operation and found her in perfect health scarcely to be recognised as her face had so filled out and able to perform her day's work without discomfort She had put on three stones in weight I can justly claim this as a success, but in so doing I must confess to a failure in another case of the same class

I have now something to say about the more interesting and satisfactory group presenting gastric or gastro intestinal symptoms I may begin by recording a fortunate case as I must end by telling of one which was most unfortunate

CASE 2 —The patient was a young woman who had been treated for several years for a supposed gastric ulcer She had suffered from repeated attacks of vomiting and pain. The pain was at first felt in her back in the lumbar region but for the last two or three years in the right hypochondrium An attack might last with remissions from a few days to a month and then she might have an interval of perfect health for several months It is specially noted by Dr G Peacocke, under whose care she was in the hospital, that the pains and vomiting were quite independent of food, and, further, it was stated that an attack never commenced while she was in bed and that it was sometimes relieved by lying down She had on no occasion vomited blood Dr Peacocke found her right kidney very moveable and at his request I performed a fixation operation This was in October, 1901 and since then the patient has been in perfect comfort and has only vomited once

This case is an *instance of the very common mistake of* assigning to organic disease of the stomach symptoms that are due to moveable kidney The differential diagnosis is, I think, sufficiently brought out in the details which I have given As an example of the opposite kind of mistake I may just mention a case I saw a year or two ago in which with [illegible]

CASE 3 —The case was Dr F T Heuston's and an exploratory laparotomy showed the tumour, which I thought was a moveable kidney, to be a massive cancer of the stomach which had been dragged by its weight into an unusual position. As comment, I may point out that the kidney like tumour was on the left side that the right kidney was not moveable, and that a left kidney is rarely if ever moveable without its fellow on the right side being moveable also

Moveable right kidney may be a cause not only of pain and vomiting but also of an actual dilatation of the stomach and it has been fully established that this dilatation may be due to peritoneal bands formed by the dragging of the kidney.

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[1] A paper read before the Dublin Biological Club on March 25th, 1903

CASE 4.—About a year ago I operated upon a young woman, one of Dr. Peacocke's patients who was suffering from pain and vomiting and presented the physical signs of a moderately dilated stomach. I fixed her right kidney which was very moveable and for six months her symptoms seemed to have been relieved. At the end of this time, however, she began again to suffer and quite recently she was again admitted to the hospital. At an exploratory laparotomy I found the stomach below its normal position, it was large and toneless, but with no evidence of kinking or other cause of obstruction at the pylorus. The pancreas and second stage of the duodenum could be lifted right away from the back of the abdomen. No fixing of the kidney (the kidney in this case had remained quite well in place since the operation a year previously) nor, indeed, any other operation could be expected to do good under these conditions. Without attaching too much importance to this case, which may be quite exceptional, I may at least suggest caution in assigning to moveable kidney a dilatation of the stomach even though the mobility be marked, the patient young, and previous gastric ulceration improbable.

Let me now relate the history of the unfortunate case to which I have referred.

CASE 5.—A woman, aged 37 years, was admitted to hospital on Nov. 16th, 1901. Four years, and again one year, previously she had suffered from pain and flatulence after food. She did not vomit and was not constipated. In February, 1901, she had what was believed to be an attack of influenza. At this time purgatives caused pain about the umbilicus. In May she had an attack of acute pain in the right side and pain after passing urine and this lasted three days. At the same time she had again pain after food. She also vomited and passed some blood per rectum. In June she lifted a heavy weight and a return of pain and vomiting followed. In July and in September she had other attacks of pain and she vomited black material. When admitted to hospital in November she was very thin and she said that she had lost much flesh. Her abdomen was quite flaccid and not distended. No tumour could be felt anywhere, but fæcal masses marked out the course of the colon and she had a very moveable right kidney. The feculent masses were removed by a succession of enemata. On Nov. 30th I sutured the moveable kidney in place and all went well subsequently for a time. In the middle of December, however, symptoms of obstruction appeared and gradually increased. Great peristaltic waves were observed and she got severe paroxysms of pain. I opened the abdomen on Dec. 15th and found a stricture of the sigmoid flexure. I incised the strictured part and I regret to say that the patient died on the 20th. The stricture was non-malignant. I have given an account of this case at some length because it has impressed upon myself a very important lesson regarding over-confidence in the diagnosis of moveable kidney as a cause of obscure abdominal symptoms.

It remains to say something of moveable kidney with hepatic symptoms, but I cannot do more now than briefly state my experience.

CASE 6.—I operated upon a female patient of Dr. Wallace Beatty in March, 1901, who had suffered from severe hepatic colic and was jaundiced at the time of operation. Her right kidney was very moveable and her gall-bladder was dilated. There was no gall-stone found though one was carefully searched for. I fixed the kidney and stitched the opened gall-bladder to the parietes. This patient has been quite well since.

CASE 7.—About a year ago Dr. Bewley saw with me a woman who was suffering from severe pain like that which a gall-stone causes. There was much tenderness in the right hypochondrium and when this became less we could quite easily make out a dilated gall-bladder and a moveable kidney. She was not at any time jaundiced. When the gall-bladder tumour disappeared she got an abdominal belt and has been in comfort since.

In addition to these cases I have seen two in which gall-stones and moveable right kidney were present together and still other cases in which with the moveable kidney jaundice was the only hepatic symptom.

With this personal experience it could not be but that I should be a believer in what is indeed commonly accepted as fact—i.e., that moveable kidney may induce symptoms scarcely to be distinguished from those due to gall-stones. Jaundice is common; the co-existence of gall-stones and moveable kidney is not uncommon; and there are now on record many cases of biliary colic similar to the case I have referred to (Case 6).

Now let me briefly state some of my conclusions. 1. That in neurasthenic cases nephropexy *may* do good seems to me proved by the first case I have described. 2. Vomiting and other gastric symptoms can certainly be cured, but if dilatation of the stomach is present a guarded prognosis must be given. I have narrated a case of failure in these circumstances but I have had in an analogous case a decided success. 3. The unfortunate case of mistaken diagnosis which I have described should make one most cautious in concluding that a moveable kidney is a cause of obscure abdominal symptoms. 4. Moveable kidney occasionally causes symptoms which exactly simulate those due to gall-stones, but seeing that the coincidence of moveable kidney and gall-stones is not uncommon it would be unwise merely to fix the kidney without a preliminary examination of the gall-bladder and ducts. Finally, whilst readily granting that most cases of moveable kidney cause no symptoms and therefore require no operation, there remain many which do cause symptoms and in a fair proportion of these an excellent result from nephropexy may confidently be anticipated.

Dublin.

APPENDICITIS WITH PROFUSE INTESTINAL HÆMORRHAGE CLOSELY RESEMBLING TYPHOID FEVER.

BY CHARLES R. BOX, M.D. LOND.,
ASSISTANT PHYSICIAN TO ST. THOMAS'S HOSPITAL AND TO THE LONDON FEVER HOSPITAL;

AND

CUTHBERT S. WALLACE, M.B., B.S. LOND., F.R.C.S. ENG.,
ASSISTANT SURGEON TO ST. THOMAS'S HOSPITAL AND TO THE EAST LONDON HOSPITAL FOR CHILDREN.

THE recognised complications of appendicitis are many but the occurrence of free hæmorrhage from the bowel is of great rarity. Several authors have drawn attention to the difficulties which in some cases attend the differentiation of appendicitis and typhoid fever but none of these appear to mention the possible occurrence of free bleeding from the bowel in the former disease.

A man, aged 51 years, whose health had for some weeks been indifferent but who had never before complained of similar abdominal symptoms, was one day seized with pain in his abdomen. The pain was referred to the right iliac region and was accompanied by vomiting. The temperature was 102° F. and physical examination revealed some tenderness in the region of the liver and gall-bladder. The pulse was poor; it varied from 110 to 150, being accelerated by the slightest exertion. The conjunctivæ were yellowish and there was a considerable trace of albumin in the urine. Intermittent albuminuria had been present for some years. The patient had lived freely and in consequence of his symptoms was restricted to a milk diet and kept in bed. The pain and vomiting were very transient and at the end of a week his condition appeared to have greatly improved. A few days later he was allowed to get up and went into his grounds. This resulted in an alarming attack of faintness and led to his being seen on the sixteenth day of his illness in consultation with Mr. W. Cox of Winchombe, to whom we are indebted for many details. The patient's mental condition was quite clear. The temperature was 102·2° and the pulse was 120, intermitting occasionally. The respirations were 40. The tongue was clean and moist. No actual pain was present but rather a feeling of fulness in the abdomen. For several days there had been diarrhœa, but this was attributed to the use of Kutnow's powder. Just before he was seen there had been a smart hæmorrhage from the bowel, more than half a pint of bright blood being passed. This was shortly followed by a loose, peasoup-like, and very offensive motion.

On examination the abdomen was found to be rather prominent and more resistant on the right side than on the left. There was a moderate generalised œdema of the tissues of the trunk and legs, but the œdema was certainly more marked in the iliac region and loin of the right side and here the skin was a little reddened, possibly from the attitude in which the patient lay. On percussion fixed dulness was obtained in the right loin and this extended well up to the base of the right lung, both in the axillary line and posteriorly. The breath sounds were rather faint at the base of the lung. The edge of the liver was felt below the ribs; it was not much enlarged, was not hard, nor was it tender. Tenderness was, however, complained of on deep pressure in the loin over the dull area. The spleen was not palpable and no typhoid spots were recognised. At night the patient was slightly delirious. 48 hours later the abdomen was more distended and tympanitic all over. Hæmorrhage from the bowel had twice recurred to the extent of half a pint of bright blood each time followed by some darker material. The abdomen was not tender and no fluid thrill of fluctuation could be obtained. The spleen could not be felt, but in the circumstances examination for it was not easy. There were still no rose spots. The nocturnal delirium continued and was more marked. The temperature was now 101·6° and the tongue was becoming dry.

Owing to the patient's condition a general anæsthetic was out of the question, so after due consideration it was determined to explore the right loin under infiltration anæsthesia. This was accordingly rapidly effected and the incision was carried down to the surface of the right kidney without evacuating any pus. Next morning a little more dark blood and some fæcal matter were passed by the bowel. The temperature had fallen to 98·4° but the pulse was 120 and intermittent and the quiet delirium was still present at night. The patient had been taking nourishment well throughout. On this day the result of the agglutinative reaction for typhoid fever was forthcoming and proved entirely negative. The nocturnal temperatures remained between 101° and 102°. Subsultus tendinum appeared. The abdomen remained distended but the patient suffered no pain. This was not due to narcotism, as during the illness only two small doses of Dover's powder and one injection of a quarter of a grain of sulphate of morphia were given. Strychnine and stimulants were used freely. Death occurred on the twenty-first day of illness.

Necropsy.—On opening the abdomen the most prominent object was the greatly distended and prolapsed V-shaped transverse colon with the omentum rolled up over it. Deep in the right iliac fossa was a discoloured and ragged abscess cavity, roofed in by œdematous omentum and containing a little pus. The appendix could not be recognised at all; it was either imbedded in the wall of the abscess or had sloughed right off. Along the outer side of the ascending colon was a series of comparatively recent adhesions with discolouration of the peritoneum. This track led up to a small deposit of fœtid pus which lay in the right kidney pouch between the kidney and the liver. The peritoneal area between the mesocolon and the mesentery was the site of a recent plastic peritonitis and the pelvic cavity contained a little pus. The hepatic flexure of the colon was discoloured and softened. It was adherent to both liver and gall-bladder and as soon as it was touched gas bubbled out. There was no trace of typhoid ulceration in either the large or the small bowel. The kidneys and liver were enlarged and probably fatty. The spleen was not much enlarged; it was soft and friable.

There are several points of considerable interest in this case, but our main object in recording it is to draw attention to the possibility of the occurrence of free hæmorrhage from the bowel in connexion with inflammation of the vermiform appendix. This rare complication, when it occurs, adds considerably to the difficulty in making a positive diagnosis. In our case although the signs seemed to point to appendicitis, yet the free hæmorrhage which occurred on the sixteenth and succeeding days of illness, together with the fever, nocturnal delirium, and extremely prostrate condition of the patient, caused grave suspicion that after all we might have to deal with a case of typhoid fever in which some peritoneal catastrophe had occurred. It is true that the temperature was not very high—102·2°—but severe intestinal hæmorrhage had occurred and was twice repeated. Of the temperature on the few days preceding the first hæmorrhage there is no record.

The unequivocal result of the agglutinative reaction for typhoid fever in this instance is an exceedingly good indication of its clinical value when properly performed, but such corroboration is hardly now needed. It is unfortunate that the exigencies of the situation prevented its earlier adoption. A curious feature throughout the course of the disease was the almost entire absence of pain after the first few days. Even firm pressure caused but little discomfort. This added to the difficulties of diagnosis, but in our experience it is not by any means unique in appendicitis. There was no opportunity of making a leucocyte count and even if made it is improbable that it would have yielded much information, since peritoneal infection even if [illegible] fever would have proved a distu[illegible] vessel from which the hæmorr[illegible] recognised at the necropsy, there can be no reasonable doubt that it was one of the branches of the superior mesenteric artery distributed to the hepatic flexure of the colon and that it was eroded by the collection of pus making its way into the bowel at this point.

The direction in which the suppuration extended within the peritoneum is the usual route taken when infection spreads upwards in the right lumbar region. In the recumbent position the pelvic brim is, so to speak, the watershed between the pelvic cavity and the loin, and an inclined plane leads along the ascending colon from this elevation to the right kidney pouch. The latter may not inaptly be compared to the gravy well of a dish and has the following boundaries: (erect position) *above*, the right half of the coronary and the right lateral ligaments of the liver; *internally*, the hilus of the kidney, the second part of the duodenum, the right aspect of the lesser omentum, and the foramen of Winslow; *externally*, the diaphragm and outside that the pleural sac and abdominal wall; *below*, the hepatic flexure of the colon and its attachment to the abdominal wall; and *anteriorly*, the renal impression of the right lobe of the liver. *The floor* of the pouch (in recumbency) is formed by the peritoneal aspect of the right kidney.

The peasoup-like and offensive motion which was passed soon after the first hæmorrhage and before the exploratory operation probably consisted of pus from the right kidney pouch and so accounted for the marked alteration in physical signs observed and also for the failure to evacuate pus when exploration was made in this locality.

SOIL NITRIFICATION *v.* THE INCIDENCE OF MALARIA AND OTHER MOSQUITO-BORNE DISEASES.

By ARTHUR R. WADDELL, M.D. GLASG.

DURING the course of some experiments which I carried out upon the destruction of mosquito larvæ I was impressed by the deadly poisonous effect which attenuated solutions of ammonia had on them. Using the strong liquor ammoniæ (specific gravity 0 880) as a standard, a solution of 1 in 4000 proved absolutely fatal to mature larvæ. Solutions so much weaker sufficed to kill younger larvæ that I computed that the presence in water of such minute quantities as only 1 in 20,000 or 30,000 would be prohibitive to the life of those newly hatched. Unfortunately, I was unable, owing to the shortness of our mosquito season in this country last year, to verify fully this estimate. My experiments, however, went to indicate that ammonia is poisonous to mosquito larvæ in all its combinations, the nitrogen unit being the index of effectiveness. Following this up, I came to the conclusion that here we have a force of enormous potentiality in the crusade against malaria and one, moreover, which is capable of practical application. This force consists in the effective nitrification of the surface waters and vegetation through the medium of the soil, the former checking the existence of the larvæ and the latter being [illegible] brought about in two ways, [illegible] f nitrogenous manures, and, secondly, by fostering the growth of certain plants belonging to the leguminosæ which are known by their peculiar root action to add to the nitrogen in the soil. As this peculiar property pertaining to this order of plants belongs more to the domain [illegible] be well if I [illegible] earth bacte[illegible] nitrogen from the atmosphere. They are accordingly referred to as nitrogen-fixing plants. The growth of these plants may be encouraged and stimulated by the use of phosphatic manures and also by inoculating the ground and the seed to be sown on it with cultures of these earth bacteria referred to, which are sold commercially under the name of "nitragin." The bacterial organisms themselves are, however, the real nitrogen bringers or nitrifiers, the leguminosæ being dependent upon their presence at the roots for healthy growth. These organisms abound in all good cultivated soils in which there is a sufficiency of phosphates, potash, and lime, the last especially being of vital necessity to them, and they are most active at a temperature of about 99° F., cold and absence of moisture inhibiting them. Good cultivation assists them. It is possible with their aid to grow crops extremely rich in nitrogen on a soil which is otherwise almost devoid of nitrogenous elements. Their presence in a soil is indicated by the growth upon the leguminosæ roots of small nodules sometimes as large as a small pea.

Evidence of the inhibitory influence of ammonia upon certain other low forms of animal life is found in some facts bearing on the nematode worms which live parasitically in the alimentary tracts of horses, cattle, and sheep, and set up in the last two a fatal wasting disease characterised by scouring diarrhœa. This disease, known as parasitic enteritis, is found to be persistently associated with certain pastures (called "teart" lands in the West of England) upon heavy moisture-retaining soils, the larvæ, in fact, living in the damp earth of these pastures, in mud, &c., and being thence transferred to the stomachs of their definitive hosts.

Experimenting on the adult thread-worms (strongylus) from a horse, practically identical for purposes of experiment with those of cattle, I got the following results by immersing them in solutions of ammonia (specific gravity 0·880): a strength of 1 in 2400 killed in three minutes; one of 1 in 4800 killed in five minutes; one of 1 in 9600 killed in 14 minutes; and one of 1 in 15,000 killed in 22 minutes. In a solution of 1 in 30,000 they were all dead at the end of five hours, the controls being alive and very active at the end of 24 hours.

That the nitrogenous elements in the soil play an important rôle in limiting the incidence of this disease is evidenced by a report[1] upon certain investigations concerning the grass grown on two contiguous patches of land, one not associated with the occurrence of parasitic enteritis in cattle fed upon it and the other notorious in this connexion and described as one of the "teart" lands referred to. Samples of hay grown on the respective areas were analysed with the following result:—

Table showing the Results of Analysis of Grass dried at 212° F.

—	From sound land not causing parasitic enteritis.	From "teart" land causing parasitic enteritis.
	Per cent.	Per cent.
Total nitrogen...	3·57	1·877
Albuminoid nitrogen	2·41	1·20
Nitrogen as nitric acid... ...	0·0107	0·010
Total acidity	0·088	0·104
Non-volatile acidity	0·039	0·100

In the same journal, in a report[2] upon the Improvement of Permanent Pastures by the application of phosphatic manures and the consequent growth of nitrogenising plants, it is stated that "the quality of the herbage generally has been so far improved that whereas cattle stocked here were formerly liable to be severely scoured through eating the grass and herbage this ailment has steadily declined until at present he has not a single case of it." So much for indirect corroboration.

From our very doors, as it were, comes more direct support. I allude to the great decrease of malaria in England during recent years. It has been suggested that the improved drainage of the land has been largely responsible for this, but other factors have helped and amongst these the increased nitrogenisation of the soil by the widened use of phosphatic manures, the extended growth of clovers, and the enormously increased use of nitrogenous manures have played an important part.

Thus far I have only had under consideration the direct effect of nitrogen upon mosquito larvæ, but the increased nitrogen in the tissues of plants grown upon fully nitrogenised soils should also prove inimical to adult mosquitoes feeding upon their juices. In this connexion we have already seen that crops exceedingly rich in nitrogen can be produced by the aid of the earth bacteria.

Malaria is such a world-wide scourge and the problem of its mitigation is so urgent that no time should be lost in making practical tests to establish the most effective way of employing soil nitrification against its distribution. There is plenty of scope for doing so. The irrigation areas in India are a case in point. In these malaria, from causes which need not be here discussed, has increased with the irrigation. Parts of the Roman Campagna, too, lend themselves readily for the purpose. An area of the cultivable portion should be taken in hand, one part nitrogenised directly and another part dressed with phosphatic manures and heavily planted with leguminosæ. I have no doubt that the area which has the good fortune to be so treated will immediately benefit and experience a marked amelioration of its malarial conditions. A word at this juncture upon an economic aspect of the question. Soil nitrification has this advantage over the generality of hygienic applications, it is *per se* directly profitable, the increased yield of produce more than compensating for a proper expenditure in effecting it.

Before concluding I would like to say that I am well aware that not all bodies of water, great or small, in which mosquitoes are likely to breed can be directly affected from the soil. I know, for instance, that subterranean oozings, rain-water accumulations, &c., not carrying nitrogenous elements in any quantity, if at all, will continue to afford the insects the facilities which they require, that the flooding and consequent waste of nitrogen incident to tropical rain storms will continue to be counteracting influences to nitrogenisation, but the main principle will remain, and this is what concerns me, that effective soil nitrification, scientifically pursued, will all the time act against the existence of the mosquito.

Potters Bar.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

SECONDARY HÆMORRHAGE FROM THE RIGHT EXTERNAL ILIAC ARTERY FOLLOWING PERITYPHLITIC ABSCESS.

By J. RAMSAY, M.S., M.B.MELB.,
SURGEON-SUPERINTENDENT, LAUNCESTON HOSPITAL, TASMANIA.

AS severe secondary hæmorrhage from the external iliac artery is not common in perityphlitic abscess I have thought fit to report the following case.

A boy, aged 10 years, was admitted into the Launceston Hospital, Tasmania, on August 29th, 1902, with a swelling in the right iliac fossa extending upwards to an inch below the level of the umbilicus. A fortnight before this severe pains in this region and down the right thigh had come on with anorexia, constipation, vomiting, feverishness, and sweating. The right thigh was kept flexed. On Sept. 15th, under chloroform, an incision was made obliquely over the swelling, splitting the muscle layers, and from three to four ounces of pus were evacuated, as well as a sloughy soft tubular mass about an inch long, which may have been a piece of slightly dilated appendix. The cavity was extraperitoneal and extended from the brim of the pelvis up behind the colon for a short distance. Gauze and a rubber tube were inserted for drainage. The temperature remained about normal after the operation and the rubber tube was finally removed on the eighth day, a little gauze being placed in the cavity. On the ninth day after operation he was seen to be very pale and a large quantity of blood had saturated the dressings and bedding. By packing the wound tightly with gauze the hæmorrhage, evidently arterial, was controlled, the pulse being weak and rapid. Normal saline enemata were given. On the eleventh day after operation the wound was re-packed gently; no fresh bleeding was taking place. That evening he had another severe arterial hæmorrhage from the wound which could be controlled by firm pressure over it. An anæsthetic was given; the wound was enlarged and the peritoneum was peeled up, but the hæmorrhage was so free that search for the bleeding point was impossible. It was controlled by pressure over gauze packing, whilst through a vertical incision, splitting the right rectus with the patient in the Trendelenburg position, the external iliac artery was ligatured transperitoneally just below its origin. There was no sign of a vermiform appendix on hasty examination. The vertical wound was closed with sutures and the old wound was explored. The severe hæmorrhage had ceased, but there was a little pumping from the distal part of a ragged sloughing portion of the external iliac artery which opened up the lumen of the vessel for about one and a quarter inches. A silk ligature around this distal part controlled the bleeding. The cavity was wiped with pure carbolic acid and packed with gauze. The pulse was 136, very small, and soft after the operation. The foot of the bed was elevated, the limbs were bandaged over wool, and normal saline enemata, six ounces, with liquid peptonoids and a little brandy, were given every two hours. A hypodermic injection of 5 minims of liquor strychniæ every three hours was ordered later, as his pulse appeared to be weaker. He gradually improved after this, though very anæmic. The vertical incision healed by first intention; the oblique one healed gradually and not completely till the silk ligature (placed distally to the ulcerated portion of the artery) came away on Nov. 14th. He was discharged convalescent about a month later.

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[1] Dr. J. A. Voelker, consulting chemist to the Bath and West and Southern Counties Society: Journal of the Society, vol. xiii., 1902–03, p. 155.

[2] W. Ashcroft and F. J. Rowbotham, ibid., p. 135.

Tasmania.

NOTES ON A CASE OF STRANGULATED LEFT DUODENAL (RETROPERITONEAL) HERNIA SUCCESSFULLY RELIEVED BY OPERATION.

BY PRIESTLEY LEECH, M.D., B.S. LOND., F.R.C.S. ENG.,
HONORARY SURGEON TO THE ROYAL HALIFAX INFIRMARY.

THE notes of this somewhat interesting case are as follows.

I first saw the case at 3 A.M. on July 15th, 1902, with Mr. J. A. Marsden of Lightcliffe. The patient was a finely built young fellow, aged 26 years, some six feet in height and very muscular. He had been playing in a cricket match on the 12th, and in the evening he had had a very hearty supper of beefsteak and peas. In the early morning of the 13th he was awakened by severe pain across the abdomen, vomiting following, and he could not get any action of his bowels. Mr. Marsden had attended him for a similar attack in the early part of April, 1902, and relief had been obtained by calomel; the patient had also had an attack in the beginning of the same year when the bowels had refused to act for two days. Neither of these attacks was so severe as the present one, the pain and vomiting being much more severe. The pain was very intense, became worse at intervals, and was only partially relieved by morphia. At 3 A.M., when I saw him, he was pretty deeply under the influence of morphia and complained even then of the pain coming on in spasms. He had passed neither flatus nor fæces since the 13th; the vomit had no fæcal smell, but was darkish brown in colour such as often precedes stercoraceous vomiting; the pulse was good and not quickened. The abdomen was moderately distended all over, but there seemed occasionally to be a more pronounced distension localised to an area in the middle of the abdomen and this localised distension and some peristalsis were more marked when the attacks of pain came on as if the distension and pain were due to local spasm of the intestine. The abdominal wall was somewhat rigid, but there was no marked abdominal tenderness. The temperature was normal; enemata had been given without effect. A diagnosis of probable intestinal obstruction was made and it was decided that if he were no better in a few hours operation should be strongly recommended. He was seen again about noon on the 15th. Turpentine and castor oil enemata had been given without avail and the last vomit was distinctly fæcal. Laparotomy was recommended and agreed to, no decision being come to as to the cause of the obstruction.

The abdomen was opened on the same afternoon and before opening it the localised distension before mentioned was more distinctly marked owing to relaxation of the abdominal muscles by the anæsthetic. This distension covered an oval area some seven or eight inches long by four or five broad; the long axis of the oval was placed somewhat obliquely from right to left across the middle line, the upper pole being to the right of the middle line below the liver. On opening the abdomen and pulling aside the omentum the small intestine was seen to be moving behind the mesentery and a diagnosis of retroperitoneal hernia was made. The opening of the hernial sac could not be felt, so the incision was enlarged upwards when it was found that a good portion of the small intestine was contained in a sac behind the mesentery; the mouth of the sac looked obliquely upwards and to the right with a slight forward inclination, the anterior and lower margin being thickened and arched. The finger was passed inside the sac and about a yard of intestine was withdrawn; the abdomen was then sewn up The patient progressed without a single bad symptom and the stitches were removed on the twelfth day, but on the thirteenth day after a severe sneeze the patient felt something give way and on removing the dressing it was seen that the skin wound had been torn open except the upper two inches of the incision, the muscles being exposed. Chloroform was given and the wound was sewn together with a curved Hagedorn needle. Some suppuration took place and about a week later the patient complained of occasionally feeling what he described as a "puffer" going off under the dressings; two or three days later it was discovered that there was a small intestinal fistula which discharged wind and a small quantity of bile-stained fluid at intervals. Whether this was caused by the needle in the second sewing having perforated the small intestine or not I *cannot say, but this seems the most likely explanation.* The patient is now in good health and has had no further attacks of pain.

With regard to the diagnosis of the condition before operation I think a fairly accurate diagnosis might have been made had the condition of retroperitoneal hernia been borne in mind; to assist the diagnosis there were the history of two previous attacks of partial obstruction, the presence of a more or less central tumour, and the paroxysmal character of the pain; these would certainly suggest retroperitoneal hernia as the cause of the obstruction. Another point to which I should like to draw attention is the exact cause of the obstruction in these herniæ. Treves[1] says that when strangulation occurs it is always produced by the margins of the orifice of the sac. In this case it was not the orifice of the sac which was causing the strangulation, for the finger and thumb were introduced without much difficulty into the orifice and the intestine was fairly easily withdrawn, nor were there any marks of strangulation on the bowel. That the obstruction was due to volvulus or twisting of the bowel admits of no doubt. The sac in retroperitoneal hernia is a congenital condition and probably always contains more or less intestine; should the amount of intestine in the sac become increased and distended or should the intestine usually contained in the sac become more distended from some indiscretion in diet increased peristalsis occurs and twisting may easily take place leading to obstruction. Knaggs[2] has drawn attention to the occurrence of volvulus in hernia as a factor in causing obstruction and Moynihan[3] mentions that volvulus has been found in retroperitoneal herniæ. As the inferior mesenteric vein lies in the neck of the sac one would hesitate to cut the margin and for the same reason I did not make any attempt to close or to obliterate the mouth of the sac. Lastly, there is the question of nomenclature. Treves[4] gives some seven names for this hernia and too many names lead to confusion. It would be a gain if these herniæ clinically were called right and left duodenal hernia, leaving to the anatomists any discussion as to the exact fossa which forms the sac of the hernia. Moynihan[5] says the left duodenal hernia is in the fossa of Landzert and not in the fossa duodeno-jejunalis. However this may be, I think it would be a distinct advantage if the terms right and left duodenal hernia were applied to these cases. The left duodenal herniæ are much more common than the right duodenal herniæ.

Halifax.

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[1] Intestinal Obstruction, p. 111.

[2] On Volvulus in Association with Hernia, Annals of Surgery, April, 1900.

[3] Retroperitoneal Hernia.

[4] Op. cit.

[5] Op. cit.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum m tum proprias collectas habere, et inter se De Sed. et Caus. *Morb.*, lib. iv., Prœmium.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

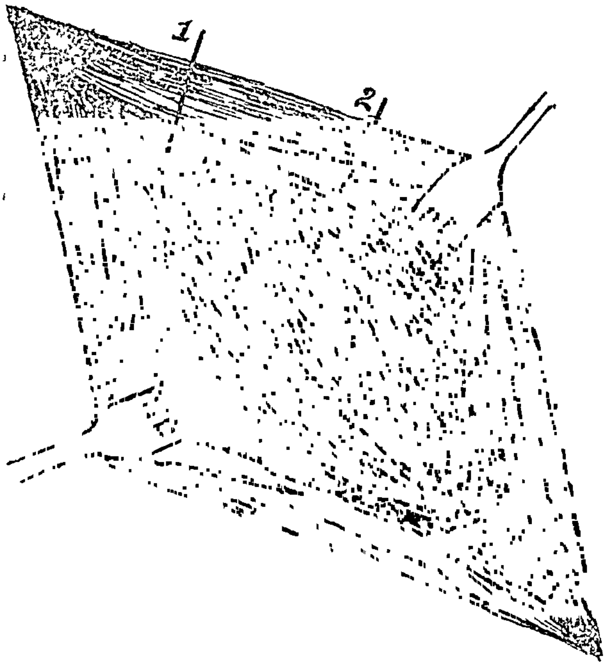
A CASE OF DOUBLE CONGENITAL HERNIA, WITH HERNIA OF THE BLADDER ON THE RIGHT SIDE AND HERNIA OF THE CÆCUM AND APPENDIX ON THE LEFT SIDE.

(Under the care of Mr. H. STANSFIELD COLLIER.)

FOR the notes of the case we are indebted to Dr. H. Y. Taylor, late house surgeon.

The patient, a boy, aged two years, fat and healthy-looking, was admitted to the Hospital for Sick Children, Great Ormond-street, for "double rupture." The following is a brief history of the case. There was no evidence of hernia at birth. A swelling in the left groin was first noticed when the child was six weeks old. The swelling was then of the size of a marble but gradually increased in size and at the end of a month it reached to the scrotum. At the age of five months a similar swelling appeared in the right groin and gradually increased in size until it reached to the scrotum. Various forms of trusses were applied by the medical attendant but were of little use. Between the age of six and eighteen months the child had occasional attacks of "colic" lasting for four or five hours. On these occasions the scrotum became more distended and tender to touch. The herniæ had never been irreducible and there had been little or no constipation. There had been no difficulty in passing urine nor had anything abnormal been noticed in regard to micturition. On admission the child was found to have a very large double hernia filling up the inguinal canal and scrotum on each side. Both herniæ were easily reducible. There was a slight phimosis but urine was passed readily enough. The bowels were regular and the general health was excellent.

FIG. 1.

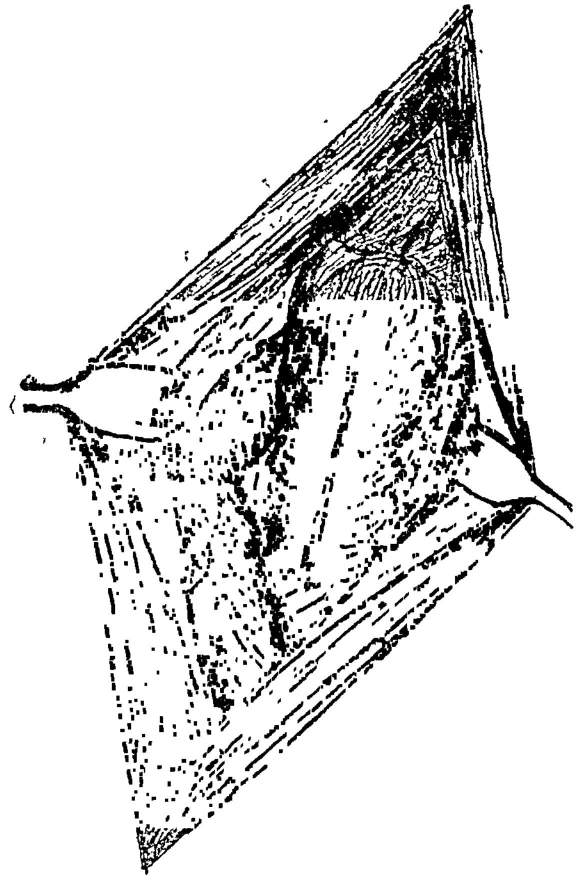


1, Bladder. 2, Sac and contents.

At Mr. Collier's request Dr. Taylor operated on the right-sided hernia. It was found to be a congenital hernia, the sac containing small intestine. The sac was dissected out and the contained bowel pushed up into the abdomen. There was difficulty in separating the sac from the surrounding tissues, as the former was very thin and tore readily. There was then found to be an apparent thickening of the sac at its upper end extending from the neck of the sac for three-quarters of an inch along its inner aspect. On examination this proved to be due to a para-peritoneal hernia of a portion of the bladder (Fig. 1). This was not closely adherent to the sac and was easily loosened from the tissues in which it was lying and pushed gently back into the abdomen. The sac was then ligatured, the pillars of the ring were brought together by silkworm gut stitches, and the operation was completed in the ordinary way. The child made a straightforward recovery. It is important to note that there had been nothing in the history of the case or in the local condition to lead one to suspect before operating that there was a hernia of the bladder.

Three weeks after the first operation Mr. Collier operated on the left-sided hernia. The sac was exposed and opened and the contents were found to consist of cæcum, appendix, an inch of ascending colon, and two inches of ileum (Fig. 2). The appendix was quite healthy and two inches long. The contents were pushed back into the abdomen, the sac was ligatured, and the operation was completed. Recovery was straightforward. Two weeks afterwards circumcision was performed and a week later the boy was discharged well.

FIG. 2.



Sac laid open showing contents.

WATTON COTTAGE HOSPITAL.

A CASE OF CHRONIC ULCERATION OF THE STOMACH COMPLICATED BY HAIR-BALL.

(Under the care of Dr. H. MALLINS.)

A WOMAN, aged 22 years, was admitted into the Watton Cottage Hospital on April 12th, 1902, suffering from gastric symptoms. With regard to her previous history the patient, though of weak intellect, had worked as a domestic servant since the age of 15 years. She seemed to have enjoyed fairly good health until the last two years when indigestion troubles began. In October, 1901, she was obliged to leave her situation owing to frequent attacks of sickness and pain after food. Shortly before her admission she vomited a small quantity of blood. A brother had died from acute pulmonary tuberculosis about ten years previously; with that exception the family history was good.

On admission the patient was found to be extremely emaciated and anæmic. The pulse was weak and the temperature was subnormal. The patient's chief complaint was of pain in the left side of the abdomen below the ribs and sickness. On examining the abdomen a large tumour of somewhat rounded outline the area of which could be covered by an ordinary soup plate, was at once perceptible. By palpation and percussion its outline could be traced from the tip of the ensiform cartilage to a transverse line running two inches below the umbilicus. Its right edge, which was the most prominent, could be felt extending into the hypochondriac region about two and a half inches *from the middle line*. The left margin was ill defined and its percussion dulness seemed to merge into that of the spleen. The tumour was very firm on pressure and quite free from tenderness with the exception of its extreme left margin. It could be easily caught between both hands and moved *from side to side*. *No pain except after food* was complained of, and this was never excessive and was invariably relieved by vomiting, which as a rule occurred some hours after food. All the other organs of the body seemed to be healthy. The abdominal measurement over the most prominent part of the tumour was 24 inches. A soda and bismuth mixture was prescribed and a milk diet. Normal menstruation occurred on April 17th. On May 12th the patient's condition was as follows. There was no change in the *tumour*. The vomiting continued as before. It generally occurred during the night some three or six hours after the last food partaken of. This food returned in a pulpy mass with very little moisture. The bowels acted regularly but the stools were very offensive. On August 23rd there had been no change since the last report except an increase of the emaciation and weakness. Slight œdema of the ankles was noticeable. On Sept. 1st the abdomen was more distended and measured 26 inches over the tumour. There was a tendency to diarrhœa, three or four offensive stools being passed daily. The œdema of the legs had increased. The skin surface was nearly always cold and the pulse was almost imperceptible. On Oct. 14th the patient died at 7.30 P.M.

Necropsy.—At the post-mortem examination on opening the abdominal cavity it was at once apparent that the tumour observed during life was the much distended stomach which filled the upper part of the abdomen. Its lower border was firmly adherent to the transverse colon. There was also a slight adhesion between its cardiac end and the parietal peritoneum in the vicinity of the spleen. The general outline of the stomach might be compared to that of a large U shaped tube placed horizontally, the upper limb by far the bulkier of the two comprising the cardiac end and middle third, and the lower and much narrower limb being constituted by the pyloric end and the upper four inches of the duodenum. On opening the stomach its distending contents were seen to be a mass of black hair (weighing 1 pound 9 ounces) reaching from the cardiac end *completely filling its cavity and extending* through the dilated pylorus into the duodenum. On removal of this hairy mass the walls of the stomach were found to be much thickened and the seat of several large chronic ulcers. The largest of these was situated on the greater curvature, at the junction of the middle and pyloric thirds being oval in outline and measuring 3½ inches by 2 inches. Its floor was *formed entirely by the thickened wall of the transverse colon*. The edges of the ulcer were rolled inwards and undermined by the contraction of the fibrous tissue. In its vicinity there was a discoloured patch of mucous membrane marked with black striæ. This presumably was the spot on which the heaviest end of the hairy mass rested its black hue being due to the colouring matter of the hair. Two smaller rounded ulcers were seen on either side of the smaller curvature near the cardiac orifice. *One of them had perforated the gastric wall and its floor was formed* by the adherent pancreas; the other was still bounded by the serous coat of the stomach. In addition to these ulcers the scars of two more that had healed were noticed on the anterior wall and some three or four small but deep excavations in the vicinity of the concave border. All the other abdominal viscera were found to be healthy.

Remarks by Dr. MALINS.—The different views of the nature of the tumour taken during life—viz., retroperitoneal sarcoma, pancreatic cyst, and tuberculous enlargement of glands—are seen in the light of the necropsy to have been incorrect. The expediency of an exploratory operation was several times discussed but the extremely feeble state of the circulation was considered to be prohibitive. Had such an operation been attempted it is extremely doubtful if recovery would have taken place in view, of the very unhealthy condition of the stomach walls. An interesting question arises in connexion with the case—viz., did the hairy mass produce the ulcers by its pressure or was their origin distinct? I am disposed to take the latter view, chiefly owing to the fact noticed at the post-mortem examination that at the point where, judging from the staining of the gastric wall the chief weight of the mass impinged there was no breach of surface. It is not improbable that the ulcers produced *a morbid craving which led to such an* unnatural method of trying to appease it. The case teaches two lessons: (1) in tumours of the gastric region the possibility of hair ball distension should not be overlooked; and (2) in all doubtful cases where the patient's strength is equal to it an exploratory operation should not be omitted.

Medical Societies.

EDINBURGH MEDICO CHIRURGICAL SOCIETY.

Exhibition of Cases.

A MEETING of this society, which partook of the nature of a clinical demonstration was held recently under the chairmanship first of Sir T. R. FRASER and then of Dr. O. W. UNDERHILL.

Mr. ALEXANDER MILES showed a patient who illustrated the *Comparative Results of Chopart's and Syme's Amputations*. Both feet were cut off as a result of an accident on the railway and the right ankle showed that with Chopart's operation there was a greater width given to the extremity with resulting benefit in walking. As regarded the adaptation of artificial limbs the patient stated that the left ankle with Syme's stump was the more comfortable of the two.

Mr. MILES also showed four patients who had been operated upon for Perforated Duodenal Ulcer. The first was a female aged 21 years, who had been operated upon three years previously. There was no antecedent history of ulceration of the stomach or *duodenum*. A week before her admission to hospital she had complained of slight pain in the right hypochondrial region. This passed off, but just before her admission it had occurred with great severity and she soon became collapsed. On admission her pulse was 94 and her temperature was 99° F.; the liver dulness was completely lost. The operation was performed 20 hours subsequent to the rupture and consisted in cutting through the right rectus muscle and so getting *access to the duodenum in the first part of* which a perforated ulcer was situated. Fluid was present in the *pouch of Douglas*. The second case occurred in a *man* aged 52 years, who was suddenly seized with intense abdominal pain; there was no loss of liver dulness in this case. Under the right lobe of the liver there was an area of extreme tenderness and the maximum degree of pain was elicited here. There was no distinct fulness palpable. The operation was performed four hours after the arrest of severe *symptoms*. *On opening* the abdomen there was an escape of bile stained fluid and white flocculi resembling curdled milk. No fluid was present in the recto-vesical pouch. A drain was inserted over the pubes. The third patient was a man aged 39 years. On Oct. 25th, 1901, he had been doing hard work which necessitated his climbing over or under fences and on returning home he partook of a hearty supper. At 11.30 P.M. he was suddenly *seized* with intense abdominal pain. The operation was performed 15 hours after the perforation and was followed by a good recovery. The fourth patient was a man, aged 26 years who had been operated on five years before. He had previously suffered from dilatation of the stomach and had occasionally to wash it out. While at work he was suddenly seized with intense pain. The operation was performed two hours after the rupture. The right rectus was cut obliquely across so as to allow of better access to the duodenum which it certainly did, but the difficulty in suturing the muscle was so great that Mr. Miles had never repeated this oblique incision. The patient was fed on the fifth day by the mouth. He occasionally has to wash out his stomach but is otherwise in perfect health. Mr. Miles said that he had operated on four other patients for similar disease but unsuccessfully; in three of them the intervals between rupture and operation were respectively 18½, 60, and 54 hours; in the fourth the interval could not be ascertained. This gave an operation recovery of 50 per cent.

Mr. C W. CATHCART showed the following cases for Mr. F. M. CAIRD:—1. A woman after removal of a Gastric Carcinoma. She was operated upon on June 7th, 1902. A large mass grew from the stomach and was so adherent to the colon that it could not be separated. Six inches of the transverse colon and one-third of the stomach were removed and the patient was now in excellent health. 2. A woman who had suddenly been seized with acute abdominal pain simulating acute appendicitis. At the operation the gall bladder was found to be gangrenous and contained a calculus. These were removed and the patient is now well.

Mr. CATHCART also showed the following cases:—1. A man on whom laminectomy for paraplegia had been performed. After Dr. MacEwan had introduced the operation it was at first thought that all such cases of paralysis due to spinal disease could be cured by laminectomy, but it was soon found that only a small proportion could thus be benefited. The disease in this case was situated about the eleventh or twelfth dorsal vertebra and caused complete sensory and motor paralysis. On removing the prominent laminæ the dura mater was found to be in close contact with them and the spinal cord appeared to be compressed. The dura mater was not opened and before the operation was completed the cord had regained its normal appearance. The patient complained of great pain after the operation, but had gone on steadily improving and could now draw up his legs and could locate sensory impressions. The wound was quite healed. The paralysis was complete from July, 1902, to April, 1903 2 A female exhibiting the results of an unusually severe Whitlow. In spite of baths and the local application of ichthyol, the inflammation and swelling ran up the arm and no benefit was obtained from free incisions. In a few days the whole inflamed area suddenly became the seat of purulent foci and abscesses formed in the right shoulder-joint, in the front of the chest, and in the leg. It was decided to amputate at the elbow and for a few days the patient's life was in great danger. A streptococcus was isolated but it did not seem to grow in the usual manner. 3. A patient after short circuiting the small intestine on account of a Fæcal Fistula. 4 A patient in whom Epithelioma had developed on the seat of lupus scars on both sides of the neck.

Dr. ALEXANDER JAMES showed (1) a girl, aged 13 years, who had suffered from so-called Acute Labyrinthitis (Voltolini); and (2) a boy, aged seven years, with similar acute symptoms but associated with Blindness and Optic Nerve Changes. In 1866 Voltolini described this disease as occurring almost entirely in children and as having the symptoms of an acute specific fever, the pain being chiefly in the ears and the back of the head and associated with either insensibility or convulsions. In about a week the patients begin to improve but complain of deafness and giddiness The latter passes off but the deafness remains and is almost always absolute and complete. Voltolini described it as due to acute labyrinthitis and a good many of such cases had been recorded since. It was now, however, more generally believed to be an abortive form of epidemic cerebro-spinal meningitis. The girl was seized with the illness in December, 1902, and complained of fever and severe occipital headache, great pain on moving the head, with stiffness of the muscles of the back. She had almost constant vomiting and became comatose in two or three days. She recovered in about ten days but her hearing was greatly impaired and she soon became completely deaf. The boy was also suddenly seized with sickness, vomiting, and headache. He had been perfectly healthy previously. The right eye first became affected and the pupil was greatly dilated and later the left eye followed. The blindness was almost complete. When admitted to hospital on March 7th he complained of frontal headache; both pupils were widely dilated and did not react to light. Conjugate movements to the right were slightly impaired but there was no definite change in the fundus of the eye. The nasal secretion was examined but no organisms were found. On the 21st he was in good health but distinct evidences of commencing optic nerve atrophy were seen in both eyes. Later the vision began to improve, whilst the optic atrophy advanced. These two cases were both evidently due to the same disease, the toxin in the one case affecting the nuclei of the auditory nerve whilst it affected the nuclei of the optic nerve in the second.

Mr. H. ALEXIS THOMSON exhibited the following cases:—1. A boy after operation for Osseous Ankylosis of the Jaw. He had suffered from a stiff jaw for seven years and it was said to have been initiated by a blow. The ankylosis on the left side had arrested the development of the lower jaw as a whole. The incision was made over the left condyle and the condyle and the greater part of the ramus, as well as the condyloid process had to be removed before free movement could be obtained. There was now complete movement, though the jaw still remained small. 2. Two female patients after Excision of the Shoulder-joint for Tuberculous Disease after the method devised by Kocher. Though two and a half years had elapsed since the excision the movements of the arm in both cases were very restricted. The glenoid cavity and the upper end of the humerus were removed and so absolute ankylosis had resulted and any movements were made through, or restricted by, the shoulder-blade The disease in both cases had been absolutely cured.

Dr. GEORGE A. GIBSON exhibited a male patient suffering from Addison's Disease and presenting an intense degree of pigmentation of the mucous membranes.

Dr. NORMAN WALKER showed a series of cases of Lupus to demonstrate the permanence of cure induced by the x-ray treatment.

EDINBURGH OBSTETRICAL SOCIETY.

Tracheal Compression in an Infant.—Deciduoma Malignum—Cyst of the Labium Minus.

A MEETING of this society was held on May 27th, Dr. JAMES RITCHIE, the President, being in the chair.

Dr. ANGUS MACDONALD read notes on a case of Fatal Tracheal Compression by Enlarged Thyroid in a Newly-born Infant. The infant was born at eight months, about 10 minutes before the medical man arrived. He found the child in an advanced stage of asphyxia, but after performing artificial respiration the breathing became established to some degree; rhythmic traction on the tongue acted most beneficially in producing this result. But the manifest difficulty in the respiration led to a close examination of the neck, when he found the thyroid enlarged, its lateral lobes being of the size of a marble and of firm consistence. The breathing became more laboured, the lower ribs being drawn in with each inspiration, and by four hours after birth the infant was evidently in such a serious condition as to require operation, but death occurred during the performance of tracheotomy. It was noticed that the thyroid was covered with a network of congested veins and that the lobes seemed to swell as the body was more cyanosed. These cases are rare Dr. J. W. Ballantyne had recorded a fœtus between the third and fourth months which exhibited a general congestive enlargement of the tissues of the neck between the lower jaw and the manubrium sterni. A case was recorded by Sir J. Y. Simpson in 1855; the child was the tenth of a non-goitrous woman and on account of the pressure of the goitre died in eight hours. The goitre was as large as a hen's egg and caused forehead presentation Another case was recorded by Keiller in 1855 in which a large irregularly lobulated swelling in the region of the thyroid gland gave trouble by causing forehead presentation. A case was recorded by Dr. A R. Simpson in 1866, when the mother had been taking chlorate of potassium throughout pregnancy for the prevention of miscarriage and premature labour; the thyroid seemed to be equally enlarged in its isthmus and lateral lobes. At first there was difficulty of respiration and deglutition but at the age of four years the tumour was much shrunken and the child appeared healthy. In Dr. Macdonald's case the mother had been taking chlorate of potassium during the pregnancy from the second month; neither parent had any thyroid enlargement.

Dr W. E Fothergill of Manchester had recently had a similar case, and also Dr. J. T Hewetson of Birmingham, and in both chlorate of potassium had been administered — Dr J W BALLANTYNE, Dr D BERRY HART, Dr H O NICHOLSON, and the PRESIDENT discussed the paper

Dr J M MUNRO KERR (Glasgow) gave the clinical history of a case of Chorion Epithelioma (Deciduoma Malignum) The patient was 23 years of age and was first seen in May, 1902, suffering from pains in the abdomen and hæmorrhage from the uterus There was a history of miscarriage in September, 1901, and she had been curetted in March, 1902, which was followed by *constant bleeding In May she was extremely anæmic with* a pulse over 130 and her temperature varied from 103° to 105° F The uterus was again curetted and some masses were removed, but these were unfortunately not preserved for examination The temperature fell from 106° to normal in 12 hours after the operation but rose again slightly afterwards During the next month she had a sharp metrorrhagia and the temperature then began to show an evening rise which was considered to be due to sepsis and intra uterine douching was carried out but with no benefit At the end of July she came under Dr Kerr's care and on exploring the uterus with the finger he found a large rough mass towards the fundus which bled very freely As it was evidently a case of deciduoma malignum he removed the uterus but the patient died the same evening A post-mortem examination was refused but during the operation the broad ligaments were freely moveable and no enlarged glands were felt —Dr JOHN H TEACHER (Glasgow) gave a pathological report of the specimen with lantern slides The tumour occupied the fundus and posterior part of the uterus and was of about the size of a five shilling piece ; it was covered with mucous membrane partly ulcerated Microscopically it showed the typical structure of a chorion epithelioma but with an unusual amount of the cells which are regarded as transition forms between the Langerhans layer of the tumour and the syncytium —Dr F W N HAULTAIN, Dr BERRY HART, and Dr BALLANTYNE discussed these papers

[illegible] f Cyst of the
L [illegible] unmarried,
a [illegible] symptoms
She had noticed a small growth in the vulva for at least three years; it was painless, caused no symptoms, and had not increased in size during the last 18 months Its presence caused her much anxiety *It was situated in the posterior* third of the left labium minus or more correctly in the interlabial sulcus with its main portion in the labium minus , it measured three quarters of an inch by half an inch, had a bluish cystic surface, and was freely moveable It was not painful but on account of the mental worry it produced it was deemed advisable to remove it On incision clear serous fluid escaped and the cyst was found to be incompletely filled with a papillary growth which had all the macroscopic appearances of an ovarian papillary cystoma There had been no recurrence after its removal last September The general health improved very much after its removal — *Dr BERRY HART made remarks on the paper*

HARVEIAN SOCIETY OF LONDON.—A meeting of this society was held on May 21st, Dr W Winslow Hall, the President, being in the chair —Dr E Laming Evans showed an infant with Swelling of the Right Foot. The swelling involved the four outer toes and the dorsal and plantar surfaces of the foot to the level of the bases of the metatarsals and was for the most part firm and solid The three middle toes were webbed and there was increase in the circumference of the leg and of the right buttock The thigh appeared to be normal A skiagram showed that the phalanges of the four outer toes were expanded, that the second and the third were irregularly placed, and that the third phalanges of the third and fourth toes were conjoined The rest of the bones were normal Probably the case was one of congenital hypertrophy involving vessels, nerves, bones, muscles, and fibrous tissues, the chief characteristic being hyperplasia of the subcutaneous tissue with special involvement of the lymphatics Other possibilities were fibrochondroma or nævo lipoma The treatment suggested was dissection of the growth from the dorsal and plantar surfaces *with removal of the fifth metatarsal bone* and all the phalanges, leaving the great toe intact —Mr Francis Jaffrey thought the case likely to be one of nævolipoma.—Mr. T. Crisp English considered that the child was suffering from congenital hypertrophy, especially as the calf and buttock on the same side were also hypertrophied —Mr English showed a girl, aged five years, with a Congenital Facial Cleft An operation had been previously performed but no further particulars could be obtained The cleft extended from the right side of the upper lip to the inner canthus The right side of the nose and the right nostril were completely absent and the palate was very highly arched [illegible]
ance by a plastic [illegible]
was discussed —M [illegible]
30 years, suffering from a large Desmoid or Fibrous *Tumour of the Abdominal and Thoracic Walls* The patient had had one child The tumour had existed for eight years and at the present time occupied the greater part of the anterior abdominal wall and extended upwards over the thorax, involving the left breast.—Dr Alexander Morison showed a case of Mitral Valvular Disease with much Hypertrophy of the Heart and probably adherent pericardium, in which he considered that the chief mechanical difficulty was the reflux of blood through the auriculo ventricular orifice and some virtual stenosis of the same from enlargement of the ventricular cavity He showed the patient on account of the wide area of audibility of the systolic bruit There was also a palpable thrill The bruit could be heard in the back as low down as the sacrum and in front at the pubes but not in the femoral arteries The second sounds at the base were normal and could at times be heard to reduplicate at the level of the fourth left costal cartilage Sphygmograms showed a well marked aortic notch and cardiograms showed the flat top of systole from a hypertrophied ventricle —Mr Jaffrey showed a man, aged 47 years, with Œsophageal Obstruction There had been difficulty in swallowing for about three months and the patient's condition was becoming worse so that he could *only swallow fluids He asserted* that some ten days previously he vomited a pint of bright blood The day after admission to hospital he brought up seven or eight ounces of bright blood and immediately afterwards he could swallow with greater ease A bougie passed 12 inches and impinged on what appeared to be a hard growth Owing to the bleeding, however, it had been suggested that the obstruction might be due to a leaking aneurysm During a week in hospital the man had increased six pounds in weight No sign of aneurysm was apparent by the x rays Mr Jaffrey considered the case to be one of carcinoma and proposed to perform gastrostomy when the patient's condition became worse

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY—A meeting of this society was held on May 15th, Dr J E Gemmell, the President, being in the chair —Specimens were shown by Dr J B Hellier (Leeds), Dr E O Croft (Leeds) Dr W Walter (Manchester), and Dr D Lloyd Roberts (Manchester) —Dr W McGregor Young (Leeds) read notes of a case of Acute Mercurial Poisoning from Intra uterine Injection The case was of special interest [illegible] of placenta
[illegible] *ill more or*
[illegible] tion of the
placenta after delivery with forceps necessitated manual removal, which was followed by an intra uterine douche of a 1 in 3000 solution of biniodide of mercury followed by one of plain water On the tenth day there set in indications of sepsis and a bit of placenta was removed from the uterus Later the classical symptoms of acute mercurial poisoning became well marked Further exploration of the uterus disclosed another piece of placenta which was removed By the nineteenth day the patient was progressing well, but a recurrence of the mercurial symptoms took place *Ultimately the patient* made a good recovery Salivation and stomatitis were absent throughout, but there were soreness and stiffness of the jaws preventing mastication, severe headache, coppery taste in the mouth and severe purging and tenesmus —The President remarked that solutions made by the dissolving of compressed drugs were apt to be imperfectly mixed if used hurriedly, the solution at the bottom of the vessel being much stronger than that higher up in the same vessel —Dr Croft thought it was unnecessary to advance trauma as the explanation of the symptoms that had been described He agreed with the President's remarks anent the imperfect solution of powders and commented on the difficulties in distinguishing the diarrhœa of sepsis from that due to mercurial poisoning —Professor C J Wright (Leeds) said

that for some years he had used mercurial solutions in no greater strength than 1 in 5000 or 1 in 6000, and then only with the greatest care. He considered that weak boric or carbolic acid solutions were better for intra-uterine use than sterilised water.—Dr. Young, in reply, referred to a paper by Professor C. R. Marshall (St. Andrews) on poisoning by mercurial solutions in obstetric practice.—Dr. A. C. F. Rabagliati (Bradford) read a paper on the Causes and Prevention of Cancer. After a brief review of the principal theories at present before the profession Dr. Rabagliati propounded his own view that cancer is from first to last a disease of over-feeding. He adduced many closely reasoned arguments in support of this theory and indicated the lines of treatment to be followed on its basis.—The President complimented Dr. Rabagliati on this paper and remarked that well-nourished persons were more often attacked by malignant disease than those less well nourished.—Dr. Roberts and Mr. C. Richardson (Leeds) also spoke and Dr. Rabagliati replied.

Bradford Medico-Chirurgical Society.—A meeting of this society was held on May 19th, the President, Dr. H. J. Campbell being in the chair.—Cases and specimens were shown by Dr. Andrew. Little, Mr. J. Basil Hall, Mr. C. F. M. Althorp, and Dr. W. Mitchell.—Dr. Mitchell read notes on two cases of Disease about the Hip-joint The first case was that of a boy, four and a half years old, who had been treated for two years for supposed hip disease. The affected limb was an inch longer than the other. The tissues were swollen about the upper part of the right thigh and there were numerous sinuses leading down to bare bone. The mobility of the hip-joint was much diminished. The sinuses were first treated by injections of biniodide of mercury (1 in 1000) and afterwards of hydrozone. After 18 days of this treatment the patient was much improved in health. Chloroform was then administered and the sinuses were slit up and freely curetted. No disease of the hip-joint was detected; an area of bare bone on the shaft of the femur was chiselled away. The patient did well and all the sinuses were healed in five weeks. The boy was walking well without assistance except that he had a thickened sole for the boot of the *sound* side. Dr. Mitchell remarked on the efficacy of the hydrozone as an injection for foul sinuses; he said that owing to the gas liberated necrotic material was driven forcibly out of the sinuses. The second case was one of hip-joint disease in a woman, aged 42 years. She was suffering from hip-joint disease of three years' standing and was greatly reduced by hectic fever. After preliminary treatment of the sinuses, as in the preceding case, excision of the hip-joint was performed by the posterior incision. The result was good and the patient was walking with a crutch five months after the excision of the hip-joint.—Dr. J. Jason Wood read a paper on the Treatment of Certain Cases of Procidentia Uteri. The treatment was applicable in severe cases of complete procidentia where the woman had passed the child-bearing age; it consisted in removing the uterus by vaginal hysterectomy and, either at the same time or subsequently, performing anterior colporrhaphy together with an extensive repair of the perineum. The treatment was efficient as to result and, while not more dangerous than ventrofixation, was more certain to cure. Hysterectomy alone was not sufficient, though giving much relief to the patient, as the bladder was apt gradually to prolapse again after a time.

Glasgow Obstetrical and Gynæcological Society.—A meeting of this society was held on May 27th, Dr. J. Nigel Stark, the President, being in the chair.—Dr. Robert Jardine showed a Child born by a Breech Presentation who only lived a few hours and who had Various Deformities, External and Internal. The external genitals were those of a male but the penis was impervious and the scrotum was empty. The abdomen contained a large tumour which before death was thought to have been a distended bladder. The tumour was found to be cystic and to contain a turbid mucoid fluid which was devoid of fat but contained many cells similar to the seminal cells which secrete the fluid part of the semen. On either side of the tumour were a tube and ovary. The kidneys were cystic, especially the left. The right kidney had no ureter attached. The child was probably a transverse hermaphrodite.—Dr. A. Louise McIlroy showed, for Dr. Kelly, a large Tumour of the Uterus which had been diagnosed as fibroid complicated with malignant disease of the omentum. On section the whole tumour was found to be attached to the uterus and on microscopic examination part was found to be malignant.—Dr. Carstairs C. Douglas demonstrated Saul's Test for determining whether Milk had been Sterilised or not. The amount of pasteurisation which vitiated the test was noted. The test was considered to depend upon the presence of a ferment in the milk which was destroyed by boiling.—Mr. S. Stuart Nairne read a paper on Menstrual Epilepsy. A number of cases were said to have been so much improved that no fits had been noted during a period of even five years. The treatment advocated was dilatation of the cervix in cases of stenosis, curettage, the application of the actual cautery to the fundus, and removal of the ovaries if diseased.—Dr. Adamson, Dr. Douglas, Dr. MacLennan, and the President discussed the paper, the consensus of opinion being that the epilepsy had nothing to do with the menstrual phenomena and that disease in the pelvis ought to be treated on its own account.

Pathological Society of Manchester.—A meeting of this society was held on May 13th, Dr. J. J. Cox being in the chair.—Professor E. F. Trevelyan of Leeds read a short paper entitled "Some Remarks on Two Cases of Acute Miliary Tuberculosis."—Mr. W. P. Montgomery showed two specimens of Intussusception of Meckel's Diverticulum. In each the infolding of the process had originated an ileo-colic intussusception. The first specimen had already been exhibited a year previously to the Society for the Study of Disease in Children. At that time six or seven cases alone could be found, while during the last few months the number had increased to nearly 20. The decided inference was that many cases were overlooked either at the operation or at the necropsy.—Mr. W. P. Gowland showed (by permission of Mr. D. J. G. Watkins of Lincoln) a specimen of the Uterus, Vagina, and Two Testicles removed from the Scrotum of a Man with symptoms resembling those of Strangulated Hernia. The patient had worn a truss since childhood for a rupture (?). On Feb. 18th he was seized with acute pain in the abdomen associated with vomiting. When admitted to hospital the left half of the scrotum was empty and shrivelled and the external ring was very small. In the right half were two masses diagnosed as testicles. Between these was a third hard mass which was found subsequently to be a uterus from which a long narrow vagina passed into the pelvis without any apparent communication with the bladder or the rectum. The whole was inclosed in a sac containing fluid and no prostate could be felt per rectum.—Mr. Smith mentioned a case of Duodenal Stenosis for which Gastro-enterostomy was performed.—Several preparations were exhibited as card specimens.

British Balneological and Climatological Society.—A general meeting of this society was held at 20, Hanover-square, W., on May 21st, Dr. E. Symes Thompson, the President, being in the chair.—The officers and council for the ensuing session were unanimously elected. The report of the council on the state and prospects of the society was read and adopted.—Dr. George Oliver (Harrogate) gave an address entitled "A Few Jottings in Physiological Medicine," in which he sketched the results of recent inquiry on the effects of digestion, exercise, temperature, and altitude on the arterial, capillary, and venous pressures. He showed that each meal produced a prolonged wave-like disturbance in the arterial and capillary pressures which was traceable for a period of from two and a half to four hours and which persisted through the temporary variations of the blood-pressure induced by other causes, such as exercise, temperature, &c. The response of the circulatory mechanism to thermic variations of the weather was illustrated by daily records of blood-pressure and atmospheric temperature for three months during the past winter. The effects of altitude on the arterial pressure in winter observed during a recent visit to Switzerland were shown to be a lowering of that pressure in the medium altitudes (from 1000 to 4000 feet) and a raising of it in the higher altitudes (from 4000 to 8000 feet), the rise being due to a compensation caused in an increase of the output of the heart and of the arterial tonus —On the same evening the annual dinner was held at the Monico Restaurant, Piccadilly-circus, the chair being taken by the President. Dr. Robert Barnes and Dr. T. Henry Green were guests of the society.

Bridgwater Rural District.—At the meeting of the Bridgwater rural district council held on May 26th it was stated that the Local Government Board had given its sanction to the council's application for a loan of £23,960 for carrying out a water-supply scheme.

Reviews and Notices of Books.

Practical Handbook of the Pathology of the Skin: an Introduction to the Histology, Pathology, and Bacteriology of the Skin, with Special Reference to Technique. By J. M. H. MACLEOD, M.A. St. And., M.D. Aberd., M.R.C.P. Lond., Assistant in the Dermatological Department, Charing Cross Hospital; Physician to the Skin Department, Victoria Hospital for Children. With 8 Coloured and 32 Black-and-white Plates. London: H. K. Lewis. 1903. Demy 8vo, pp. xxiv. + 408. Price 16s. net

THERE is no other tissue or organ of the body in which the onset and course of pathological processes can be seen and felt as they can be in the skin. In this structure we find laid out before us all the various stages and forms of inflammation, and the skin might be much more utilised than is the case at present for the instruction of the student in the elementary and even in the more advanced pathological processes. In the skin, too, we have the combination of an avascular tissue, the epidermis, with one well supplied with blood-vessels, the derma; and by the study of inflammation in the skin the form it takes in avascular as well as in vascular tissues can be clearly seen. The work before us is an attempt—and after careful examination we may say a highly successful attempt—to put before dermatologists, and especially students of dermatology, a handbook which will assist them in carrying out the histological and bacteriological examination of the skin. It gives a very full account of the processes employed in the investigation of the skin both in health and in disease. It does not confine itself to a mere description of the methods used but enters into details as to the appearances of the structures examined and the objects seen. The illustrations are especially deserving of praise; they are clear and distinct and are for the most part due to the graphic skill of the author.

We are so very satisfied with the book that we have not been able to find material for a detailed criticism of the work, but on one or two points we may say a word. Dr. Macleod gives a very good account of the mode of performing "biopsies," or the removal of small portions of skin during life for the purpose of microscopic examination, but he does not mention Piffard's cutisector which is a useful little instrument introduced some 30 years ago. The author refers to "skin punches" as "recently" devised; they were first introduced by Watson in 1878, though not for "biopsies." We must also take exception to the statement that it is "almost universally admitted" that the "psorosperms" of Paget's disease are merely degenerative epithelial changes.

The book will be of great value to the diligent student of dermatology, but even the experienced dermatologist will find it convenient to have it at hand for consultation when dealing with any unusual point in the pathological histology of the skin. We know no other work in any language written on the same lines, though Max Joseph's little work, "Dermatohistologische Technik," is useful, but it covers much less ground and almost limits itself to a list of stains. We congratulate Dr. Macleod on his book, for it is a credit to British dermatology.

Die Neuronenlehre und ihre Anhanger: ein Beitrag zur Lösung des Problems der Beziehungen zwischen Nervenzelle, Faser, und Grau. (The Neuron Theory and its Adherents; a Contribution to the Solution of the Problem of the Relations between Nerve Cell, Fibre, and Grey Matter.) By Dr. FRANZ NISSL, a.o. Professor in Heidelberg. Jena: Gustav Fischer. 1903. Pp. 478, with two plates. Price 12s.

THE "neuron" theory has now held the field for over ten years as the most satisfactory hypothesis to explain and to bring into harmony all the known facts, anatomical, physiological, and pathological, regarding the structure and function of the nervous system. Although it has been almost universally accepted, there have not been wanting histologists who have brought forward from time to time certain new facts of research which, it has been contended, necessitate the rejection, or at least a modification, of the theory as first put forward and defined by Waldeyer. In this way there has grown up a small band of opponents to the neuron theory, among whom are especially to be mentioned Bethe, Apathy, and Nissl. Dr. Nissl is one of the latest recruits to the ranks and in the treatise under review he defends his position and undertakes to controvert all the arguments put forward in defence of the neuron theory by its most notable adherents. The treatise is in consequence of a highly contentious and polemic nature and the author does not spare himself or his readers in his very lengthy dissertations in order to disclose a faulty point of logic in the arguments of his opponents. Instead of choosing the most obvious method of treating the subject by laying his own views clearly and concisely before his readers he makes the champions of the neuron theory the subjects of separate chapters and his own views and opinions are left to show themselves in the course of his discussions. This does not make easy reading, but the author is of opinion that in this way he more clearly discloses the falsity of his opponents' views.

In reviewing the treatise it is not possible to give even a short *résumé* of the many points raised by Dr. Nissl, mostly of a highly technical nature, by which he seeks to overthrow the neuron theory. At the start he defines the theory in the words of Waldeyer: "The nervous system consists of numerous nerve elements anatomically and genetically independent of one another," and he will accept no modification of the theory as laid down by Waldeyer. Following this line of argument he accordingly rejects any attempt to recognise the theory of nerve units in a biological sense (Edinger) or to regard the nerve units as trophic and functional (Hoche), or as embryonic and trophic (Münzer). Dr. Nissl contends that if known anatomical or physiological facts do not harmonise with the view that the nervous system consists of so many independent nerve units or neurons, the neuron theory necessarily falls to the ground. Many of the facts which he brings forward are already sufficiently well known, such as Bethe's experiment on the crab, in which he obtained reflex phenomena after removal by section of all nerve cells involved in the reflex path. Apathy has already shown by his work on annelids that, at least for certain invertebrates, the neuron theory can no longer be maintained. Dr. Nissl admits that our ignorance of the actual connexions and relations between nerve cell, nerve fibre, and the grey matter prohibits our applying the results of Apathy's work to vertebrates, but he is disposed to believe that an analogous condition exists. He maintains that we are quite in the dark as to the constitution of the grey matter of the cortex and he believes that it contains in addition to nerve cells, neuroglia, and blood vessels, certain nerve elements the nature of which is at present unknown to us. Much of the book is taken up with histological details in regard to the structure of the nerve cell, the fibrils, and the pericellular network and their mutual relationship, about which he has much to dispute with Ramon y Cajal and others.

Dr. Nissl is one of the highest authorities on the histology of the nervous system and it will be interesting to follow the effect which his treatise may have upon those working in the same sphere.

LIBRARY TABLE.

Nerves in Disorder. By A. T. SCHOFIELD, M.D. Brux. London: Hodder and Stoughton. 1903. Pp. 202. Price 3s. 6d.—We learn from Dr. Schofield's preface that his book consists mainly of a lecture delivered some twelve years ago at the Sanitary Institute. We are not as a rule enamoured of medical works published for lay people but to do him justice Dr. Schofield makes an apology for the issue of his book, and we think that he is justified. Even nowadays those diseases which for want of a better name we call "functional nerve disorders," though they may not improbably be based upon some minute organic changes in the nervous tissues, are frequently looked upon as "imaginary" and there is no class of disease in which sufferers are so wont to fly to the use of "cures" of various kinds or of some particular form of diet or even to such blatant forms of imposture as Christian Science. Therefore we think that when a patient sees, as he will see if he reads this book, that medical men do recognise that "nerve weakness" is a disease which can be "cured" just as easily as any other disease by means of appropriate treatment, he, or more likely she, will not waste his or her substance upon quackery and his or her remaining stock of health in the pursuit of a phantom. We cannot agree with all Dr. Schofield's statements; for instance, p. 37, "The sensation of pain can be produced as really and vividly by thoughts or ideas alone as light in the eye by striking it." Now this statement requires modification. The pain which the neurasthenic suffers is eminently real and is probably entirely produced from within. But we deny that if an ordinary healthy normal man or woman sits down and thinks of, for instance, a splinter being driven under the nail any sensation of pain will be felt. Again, we think it a pity that Dr. Schofield has given such a copious list (pp. 82 and 83) of all the symptoms which may characterise neuromimesis, for the mere perusal of the list would cause alarm to a nervous patient. But on the whole we fancy that the book may prove of use.

Burdett's Hospitals and Charities, 1903. By Sir HENRY BURDETT, K.C.B. London: The Scientific Press, Limited. Pp. 1020. Price 5*s.*—A very large amount of information is contained in this compact volume. About 450 pages are occupied with lists of the hospitals, asylums, dispensaries, convalescent homes, and nursing institutions of the British Islands and about 100 pages with a similar enumeration of Colonial and Indian hospitals; 14 hospitals are mentioned as situated in our newly acquired South African possessions—the Transvaal and Orange River Colonies. The introductory part of more than 200 pages is divided into 13 chapters treating, among other subjects, of such questions as the general outlook for British hospitals, the administration of a large hospital, hospital construction, nursing, Hospital Sunday Fund, Hospital Saturday Fund, and hospital finance. As a book of reference Sir Henry Burdett's compilation is one of the most useful of its class.

Physics and Chemistry adapted to the Requirements of the First Examination of the Conjoint Board of the Royal Colleges of Physicians and Surgeons and also for General Use. By HERBERT E. CORBIN, B.Sc., L.R.C.P. Lond., M.R.C.S. Eng., and ARCHIBALD M. STEWART, B.Sc. Lond. Second edition. London: J. and A. Churchill. 1903. Pp. 438. Price 6*s.* 6*d.*—The first edition of this book was published in 1899 and was reviewed in THE LANCET of Nov. 4th of that year, p. 1239; the authors state in the preface of the present edition that a few alterations have been made and that a little additional matter has been inserted. It appears that about 14 extra pages of letterpress have been supplied, but, strange to say, no attempt has been made to bring the book up to the standard of the present requirements of the English Conjoint Board. The syllabus now in force for the chemistry and physics section of the first examination of the board expects the candidate to possess a certain amount of knowledge of Light, whilst special reference is there made to secondary batteries. Both of these subjects have escaped attention at the hands of the authors of this text-book. These omissions are the more curious, as the preface distinctly states that "the syllabus of work in physics, in inorganic chemistry, and in organic chemistry issued by the Royal Colleges of Physicians and Surgeons has been fully treated." We notice also that the unfortunate description of starch given in the first edition, where it is distinctly implied that the granules from different plants all possess the same distinctive microscopic appearance, is retained unaltered. The Ruhmkorff induction coil has been treated in a fuller manner than was the case in the previous edition and as a rule the diagrams are good and the information given is clear and concise. We cannot but feel, however, that the value of the book to a student reading for the English Conjoint Board examination would have been greatly enhanced if the syllabus had been more thoroughly dealt with.

Alpine Flora for Tourists and Amateur Botanists. By Dr. JULIUS HOFFMANN. Translated by E. S. BARTON (Mrs. A. Gepp). London: Longmans, Green, and Co. 1903. Pp. 112. Price 7*s.* 6*d.* net.—This translation into English should prove a useful companion to tourists who know but little botany but who wish to be able to identify the various plants which they may come across in the High Alps, whilst the amateur botanist at home may obtain some idea of the richly tinted flora of the Alps by the aid of the 40 plates which the book contains. These plates are reproduced in colours from original water-colour drawings of Alpine flora by Hermann Friese, the number of individual plants figured being 250. With a view of limiting the size of the book only the more important plants of the High Alps are mentioned in the text. Each plant is clearly described and there is a short glossary at the end of the book explaining such botanical terms as it has been found necessary to use for the sake of accurate description. As an aid to the traveller in eliciting information from the country people of the Alpine districts the names of many of the plants mentioned are given in German. The arrangement of the botanical families is based upon the system of De Candolle.

JOURNALS AND MAGAZINES.

The Quarterly Journal of Microscopical Science. Edited by E. RAY LANKESTER, F.R.S., ADAM SEDGWICK, F.R.S., W. F. R. WELDON, F.R.S., and SYDNEY J. HICKSON, F.R.S. New Series, No. 185. Vol. XLVII., Part I. May, 1903. London: J. and A. Churchill. Price 10*s.*—The contents of this number are:—1. A long article by H. J. Hansen of Copenhagen on the Genera and Species of the Order Symphyla. The order includes Scutigerella and Scolopendrella. The author of the article has examined many specimens from Algeria, Cape Colony, Venezuela, Chili, the Brazils, Java, Sumatra, and Japan, and describes 24 species. He is convinced that about 100 species are still undiscovered. Collectors should preserve their specimens in spirit of about 63 per cent. alcoholic strength and at most not exceeding 70 per cent. and the specimens should not be pressed upon so as to become flattened. The article is illustrated by seven plates. 2. On the Body Cavities and Nephridia of the Actinotrocha Larva, by Edwin S. Goodrich, M.A., with two plates. 3. Enteropneusta from Madras, by K. Rammuni Menon, assistant professor, Presidency College, Madras, with a plate. The enteropneusta described by the author were dredged at depths of from six to nine fathoms in mixed sand and mud off the Madras coast and belonged to three species. 4. On the Planktonetta Atlantica Borgert, by G. Herbert Fowler, F.Z.S. This animal is a Phœodarian Radiolarian possessing in addition to the ordinary shell of the Medusetlidæ a hollow skeletal sphere larger than the shell, here termed a float. The mouth of the shell carries eight spined arms and gives origin inwards to a skeletal meshwork across the aperture which serves to connect float and shell and to support the phœnodial complex. A bundle of fine tubes leads from the intracapsular to the extracapsular protoplasm, perforating the capsule and the diaphragm. The float, the diaphragm, and the single bundle of tubes of communication are unparalleled among radiolaria. Two plates accompany the article.

The Field Naturalists' Quarterly. No. VI., vol. II.—Edited by GERALD LEIGHTON, M.D. Edin. London and Edinburgh: William Blackwood and Sons. Price 2*s.* 6*d.*—Each succeeding issue of this interesting quarterly seems to show some improvement upon that of its predecessor. In the present number, which is well illustrated, Mr. E. Kay Robinson, in an article on Birds, solicits help in the compilation of a dictionary of the language of birds, while Mr. F. G. Aflalo writes upon "The Spring Awakening of the Sea." In "Reptile Studies" the editor discusses the question of immunity, the much debated question as to whether the mongoose is immune or not to snake-bite receiving special attention. Mr. E M. Wood deals with the subject of Symbiosis. Among the contents will also be found papers on the White Cattle of Chartley, Staffordshire; Newts in Spring; the Nests and Eggs of Birds; the Great Black Woodpecker; Rambles in the Lincolnshire Wold; and a Naturalist's Rambles in Southern China. The frontispiece is reproduced from a photograph showing four young robins on a bough, but the picture in the copy before us has been spoilt by being pasted to the opposite page. This fault we have noticed before and it is a pity that such an excellent publication should be marred by careless binding.

Dublin Journal of Medical Science.—The original communications in the May number are on the Operative Treatment of Enlarged Prostate, by Sir William Thomson; on the Diagnosis of Perforated Gastric Ulcer, by Mr. R. C B. Maunsell; and on Immunity, by Dr. R. J. Rowlette. The Clinical Report of the Gynæcological Department of the Rotunda Hospital, by Dr. R D. Purefoy, for the year ending Nov. 1st, 1902, also appears in this issue.

HOSPITAL MAGAZINES.

Charing Cross Hospital Gazette for May.—Under the heading of American Quacks we are glad to see that two popular magazines are called to account for publishing in their advertisement columns the mendacious effusions of quacks. Mr. P. L. Daniel commences a paper on the Conservative Treatment of Tuberculosis of Bone and Joints and of Superficial Abscesses.

St. George's Hospital Gazette for May opens with an article on Compound Fractures by Mr. L. Jones in which he states that the results of the treatment of compound fractures at St. George's Hospital during the past three years show a marked improvement. Out of 66 cases admitted only two died (excluding those patients who died from shock within 12 hours of admission). "This percentage of 3 stands out markedly against those of 40, 41·8, and even 79 which were given by various authors in the pre-antiseptic days" In a foot-note to the word stinkle, which occurs in "Kubla Khan," a parody said to have been inspired by a nightmare consequent upon reading about a proposal to remove St. George's Hospital, the ways of the motor car are aptly described. It is as follows:

Cf. nursery rhyme (new style).

Stinkle, stinkle little car!
How I wonder whose you are!
Chucking up the mud and dust
Like a geyser on the bust.

Guy's Hospital Gazette of May 23rd contains a clinical lecture on the Operative Treatment of Gastric Carcinoma by Mr. Charters Symonds and publishes an essay on the Pathology of Chorea to which was awarded the treasurer's prize by the Physical Society of the hospital.

St. Mary's Hospital Gazette for May.—In addition to a paper on Aphasia by Dr. Robert Maguire there is a short but interesting article on Medicine in China by Dr. Arthur Stanley, health officer of Shanghai. "The Chinese Pharmacopœia," says the author, "is the largest in the world." Our national summer game does not seem to be very popular among the students at St. Mary's Hospital, for in the editorial notes of the gazette attention is called to the fact that exactly six men have signified their intention of playing cricket this year.

St. Thomas's Hospital Gazette for May has for its prominent feature "Some Extracts from the Common-Place Book of William Savory, Surgeon and Student of the Borough Hospitals in 1788–89." The picture of the life of this obscure country practitioner in the eighteenth century as depicted by the extracts from his diary and common-place book makes very interesting reading.

Looking Back.

FROM

THE LANCET, *SATURDAY*, JUNE 4, 1825.

FOREIGN DEPARTMENT.

ANALYSIS OF FOREIGN MEDICAL JOURNALS.

REVUE MEDICALE—MARS.

The Olfactory Nerve.

M. MAGENDIE has lately reported to the Academy a pathological fact, in confirmation of his former opinion, that the *olfactory nerve* is *not* the *organ of smell.* BECLARD had a man under his care in the Hôpital la Pitié, in whom on dissection the anterior portion of the brain and olfactory nerves were found almost destroyed by ulceration, but who at the same time retained his sense of smell. He took snuff, and was quite capable of distinguishing its various qualities.

Appearance of a Medical Work in Turkey!

A medical work has made its appearance, the only one during 150 years, at Constantinople, it is a folio, of 300 pages, with 56 copper-plate engravings, on anatomy and medicine, entitled, "*Mirat el abd fi teohrih azail,*" by Chani-Zadeh Mehemmed-Ata-Oullah, member of the religious and judicial order of the *Oulema.* The Oulemites fill the offices of ministers of religion, of the laws, of equity, and have always endeavoured to crush the rising genius of the nation. It is not, therefore, a little surprising that a work on anatomy, physiology, medicine, and therapeutics, should be published by one of this fraternity. The substance of the work appears to be a translation from various French works. The author being a Mussulman, what he says on vaccination is very interesting; he gives its history, and insists on the many advantages it has over inoculation; he concludes by giving directions as to its use, and with some of the vaccine virus brought from the village of Aiaz-aga, many thousands have been vaccinated in Turkey.

ST. BARTHOLOMEW'S HOSPITAL.

May 23.—Robert Accam, æt. 74, hale constitution, was admitted into Baldwin's ward, with a rupture of the cornea and protrusion of the iris on the right side, in consequence of a blow from a cricket ball; his pulse was 80, full and strong; headache. Cold cloths were applied, and some purgative medicine given (no local depletion!).

28.—Pulse 85; more natural; tongue covered with a slice of Abernethy's 'leather breeches';* pain in the head subsided; slept well; the eyelids and face tumid and of a livid colour; bowels open.

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* This is a common expression of Mr. ABERNETHY's, to denote a furred state of the tongue.

THE LANCET.

LONDON: SATURDAY, JUNE 6, 1903.

"Opticians" and Spectacle Prescribing.

We publish to-day two letters, from representative "opticians," demurring more or less to the statements put forth in our leading article in The Lancet of May 9th, p. 1312, with regard to spectacle prescribing. Mr. Aitchison is fearful that some of those statements are "liable to misinterpretation," and he tells us that Young did not discover either astigmatism or the function of accommodation. It is universally admitted among men of science that the credit of discovery is not due to the person who first hints at a thing, but to him who establishes the truth with regard to it, and this is the precise position of Young with regard to accommodation, although no claim of the discovery of the mere fact of the occurrence of some change has ever been made on his behalf. "It is now nearly 60 years," wrote Donders in 1864,[1] "since Thomas Young satisfied himself that the power of accommodation depends upon a change of form in the lens. Nor was he led to this conviction merely by the exclusion of other hypotheses; he adduced reasons which, properly understood, should be taken as positive proofs. As an hypothesis the idea had already existed, but previously to the time of Young it could be considered as little more than a loose assertion, to which no value was to be attached." Young's claim to be the discoverer of astigmatism has, we believe, never before been questioned and Mr. Aitchison certainly does not succeed in questioning it successfully. The version given by Donders[2] is that in relaxation of his eye Young saw in his optometer, held in a horizontal position, the double images of the thread intersect one another at seven inches from the eye, but only at ten inches when in a vertical position. The optician Cary, to whom Young *communicated his discovery*, stated to him that he had before *often* found that near-sighted people distinguished objects more acutely when the glasses suited to them were held in a particular oblique direction before the eye—a manœuvre by which, at least when strong glasses are necessary, a certain degree of astigmatism may be corrected. On this basis Mr. Aitchison says that "Cary knew as much about astigmatism as Young did, particularly when the latter goes on to say, 'The difference is *not in the cornea*, for it exists when the effects of the cornea are removed by immersing the eyes in water.'" What really happened was this, that Cary had observed one of the *effects* of astigmatism in the cases of certain customers, but had not been led by his observation to form even a surmise as to the nature of the condition to which the effect was due. His observation remained wholly barren—so barren, indeed, that long after his time opticians were exercising their ingenuity in the construction of frames capable of holding glasses in oblique positions before the eyes. Mr. Aitchison himself, although an optician, seems to believe that Young was in error in saying that his own astigmatism was not corneal. Mr. Aitchison does not appear to know that the lens of the eye is often astigmatic, and that Young's experiment conclusively proves it to have been so in his case. It is further remarkable that Young seems to have been in no way incommoded by his defect, insomuch that he regarded the malformation of his lens only as a matter of philosophical interest, and had no inducement to design glasses for its relief. When Sir George Airy discovered a similar defect in himself, he, not as an optician but as a mathematician, calculated the curves required for its correction, and ordered lenses which were made for him by the optician Chamblant of Paris. It did not become customary for ophthalmic surgeons to prescribe such glasses until Donders in 1862 by the publication of his treatise, "Astigmatismus und Cylindrische Glaeser," had called general attention to the subject and had arranged with the opticians, Nachet of Paris, and Paetz and Flohr of Berlin, to supply the lenses to all who might require them. The discovery was made by Young in 1793 and remained unfruitful in spite of Cary and other opticians. It was made again by Airy and again remained unfruitful except in his own case, and it was not until Donders undertook the general investigation of refractive errors that astigmatism became understood and the means of relieving it universally accessible. We think the contentions of Mr. Aitchison may be dismissed from further consideration.

Mr. Laurance joins issue with us mainly on a question of words. He says, "All discoveries in optics have been made by opticians, whether medical men also or not is beside the question." Few things are more useful than definitions and we may therefore say that we used the word "optician" as a term of courtesy to indicate a person who was engaged in the sale, or sometimes also in the manufacture, of optical instruments and not to indicate one who was conversant with the physics of light. The latter sense is, no doubt, the more correct, but the former has somewhat usurped its place in common parlance. We challenge Mr. Laurance to name a single discovery relating to the structure, optics, refraction, or employment of the eye which has been made by an "optician" who was not "also a medical man." We further differ by the whole sky from his opinion that any information likely to be obtained by spectacle-sellers in the course of their trade education can ever render them qualified to prescribe spectacles for any defects of vision in which the sufferers might not safely be trusted to choose for themselves. The eye is a living organ as well as an optical instrument. As a living organ it is subject to malformations and diseases of numerous kinds, and its diseases and malformations constantly complicate and are complicated by its optical defects. It is impossible for anyone to deal adequately with the latter who is not able to deal also with the former. The first aim of an ophthalmic surgeon, when he is consulted about a case of defective sight, is to ascertain whether the eye itself be healthy or the subject of disease; and the next is to ascertain whether there be any bodily or constitutional ailment by which it is prejudicially affected. Having thus applied his medical knowledge, and having, by methods of exclusion, come to regard the defect as purely optical, he can then bring his optical knowledge into play and can prescribe spectacles for the relief of a defect which he is not called upon to cure. The so-called "optician" would have to begin at the wrong end, and would be likely, as human nature is constituted, sometimes to place undue reliance alike upon his fancied knowledge and upon the resources of his trade. Mr. AITCHISON makes mention, in more than one passage of his letter, of erroneous views about spectacles which have been entertained, and even published, by medical men who had no special knowledge of the subject. The errors quoted are of old date, and they would dwindle into insignificance before those which would certainly attend upon any systematic attempt on the part of spectacle-sellers to become practitioners in ophthalmology. It is with this attempt that the public are at present threatened. In every locality shops are springing up the proprietors of which hold themselves out, by placards, by affixes, and by advertisements, as being qualified to give advice about the eyes and sight; and we have no alternative but to denounce the whole system as one which rests upon false pretences, and which cannot fail to be followed by disastrous consequences. The new professors, we see, are being directed by the "British Optical Association" to style themselves "optologists," a name which at first sight rather suggests professors of the science of roasting or baking (ὀπτός), but which will none the less be effective in deceiving the public. The association kindly adds that the term "oculist" is nowadays understood to mean a "surgeon who operates." In the medical profession it is usually understood to mean a quack who sails under false colours by using a word which does not assert the possession of a medical qualification; and it is on this ground that qualified ophthalmologists are careful to describe themselves as "ophthalmic surgeons." The ignorance of the public has preserved "oculist," and we shall not be surprised if before long it leads them to describe even medical men as "optologists."

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[1] Accommodation and Refraction of the Eye, p. 10.

[2] Ibid., p. 456.

Public-house Trusts.

ANY movement which includes among its aims the reduction of the amount of drunkenness within the British Isles has strong claims upon the attention of the medical men of this country. In some form or other the physical and the intellectual evils wrought by the excessive use of alcoholic beverages are continually obtruding themselves upon our notice. Whether we are engaged mostly with hospital practice or with practice among the poorer classes or with practice limited to the ranks of the well-to-do we are unfortunately in each case to an almost equal extent confronted with the vicious influences of alcoholic excess. The aims and methods of the Central Public House Trust Association are doubtless in their broad lines familiar to our readers. The recent issue, however, of the association's second annual report may serve well to bring us to weigh the results hitherto achieved by the association and to consider how far the trust movement merits our support as an effort to lessen the excessive amount of drunkenness in our country. We are aware that persons who belong to what may be termed the extreme temperance party view the trust idea with scant favour. We need not in the present article set about refuting the arguments of the temperance extremist but will content ourselves with commenting upon the matter from the point of view of the average unprejudiced moderate-minded individual. To such a person the trust movement appeals because although it cannot hold out the offer of general national moderation in the use of alcoholic drinks, yet it does offer a readily available practical means of improving the conditions under which such drink is at present sold, and of gradually improving the attitude of the public mind towards the drink question generally.

The Central Public House Trust Association has two main objects. The first of these is practical and is, in short, to acquire public control of the traffic in intoxicating liquors by substituting everywhere for private licensees a public body in the shape of a public-house trust company. The second object is educational, or rather propagandist, and aims at influencing the mind of the general public by means of the public press, by pamphlets, by lectures, and through parliamentary representatives. Considering the short life of the trust movement in this country it must be confessed that the second object, at any rate, bids fair to be well achieved. For few people who read their newspaper can have escaped a general acquaintanceship with the broad principles and aims of the trust movement. Regarding the practical aim of the association we may spend a moment profitably in reviewing the present position of the association as revealed by its second annual report. This contains information relating to 37 trust companies and societies for various counties and localities. It is the object of the trust movement to have a company for every county in England and Wales. There remain at the present time 21 counties without any such company. For the institution of these companies the funds of the trust association are, of course, required, if only to pay for licences granted to the association, and in the past year the demands made upon the association's means have proved greater than the incoming money. Considerable expense is naturally involved in carrying out the propagandist work of any association aiming at a wide influence upon public opinion, and the sum expended on such purposes, under £2000, does not appear excessive when compared with the results achieved. The report suggests that practical progress has been slower than that made in the educational efforts of the association. This is not surprising when it is remembered that practical progress in the objects of the trust infers acquisition of public-house licences. The trust does not desire, of course, to acquire fresh licences unless where a fresh licence is to be granted in any circumstance, in which case the trust naturally desires to acquire the licence rather than to let it fall into private hands. The trust aims at diminishing the number of licences. But the buying up of old licences is a matter that involves considerable time and investigation. In the case of new licences as long a period as 18 months is necessary before the new house can be opened. In the case of the acquisition of existing licences there is greater difficulty in England than there is in Scotland owing to the stronger hold in this country possessed by the system through which public-houses are "tied" to one or other firm of brewers or distillers. The opportunities of acquiring important houses are few, nearly all the best houses being in the hands of the brewers. There are, however, at the present time 70 houses in town and country under trust management and more than twice as many pledged to come into trust hands when existing tenancies expire. For the acquisition of existing licences the association looks largely to land-owners, whether public bodies or private individuals. If land-owners can be impressed with the advantage accruing to those who dwell upon their land by the presence amongst them of well- rather than ill-managed public-houses, then the association may get the support that it looks for.

As the matter stands at present we think that the evidence, both from the report out of which we have made brief extracts and from other sources, points to distinct advantage ensuing from a prevalence of the trust system. We are acquainted with the unfavourable criticism of the results of the Gothenburg system in Sweden and Norway which Mr. MALINS put forward in his evidence before the Royal Commission on the Liquor Licensing Laws. We are not convinced, however, that a similar system in Great Britain need produce similar results. We doubt whether the amount of corruption that crept into the Scandinavian system would prevail in this country. Moreover, the inducements held out to municipalities to make great profits out of their public-houses and to justify themselves by the admirable objects to which such profits were devoted do not prevail under the system advocated by the Central Public House Trust Association to the same extent as they do under the Gothenburg arrangement. All reform in the direction of temperance is beset with the difficulties that hedge any attempt to control a strong though undesirable carnal inclination. Reform to an ideal degree, to the degree of making all men and women in England habitually sober, is not to be achieved at a blow. The Central Public House Trust Association is doing work which should improve the present state of the liquor traffic in this country and should help toward the realisation of that general national sobriety which to-day is unfortunately little more than the dream of the ardent temperance reformer.

Leprosy.

THE importance of a knowledge of the etiology of leprosy can hardly be over-rated. In this country it is true that the disease, though once very prevalent, is now very rarely to be met with and when seen it usually occurs in persons who have contracted it in other parts of the world. In some countries, however, as in Iceland, Norway, India, and China, it is very frequently encountered; and, unhappily, it has appeared in new countries where it had never been known before. In the Hawaiian Islands and Australia it has been found and has occurred to a large extent, appearing synchronously with the advent of immigrants coming from countries where the disease already existed. The problem, therefore, of the etiology of so widespread a disease is surely of the highest importance but although many investigators have examined the question with care the results have not been very satisfactory. There is little doubt that the bacillus lepræ, a micro-organism found in leprous lesions, is the true *causa causans* of the disease; and, indeed, this is now generally admitted, but it must not be forgotten that it has not been possible hitherto satisfactorily to cultivate this bacillus in artificial media and therefore three out of four of KOCH'S postulates cannot be fulfilled. Nevertheless, it may certainly be allowed that the bacillus lepræ is the essential cause of the disease. Even when this admission has been made it cannot be said that the problem of the etiology of the disease has been solved, for it is of as great or even greater importance for us to learn how this bacillus finds entrance into the bodies of those whom it affects. It is now held by very few that the disease is hereditary, for it is certain that healthy children can be born of leprous parents. The theory that the disease is contagious has many supporters; it is true that anyone who dwells in a community of lepers is liable ultimately to contract the disease, but 10, 20, or even 30 years may elapse before it appears and therefore we are almost compelled to believe that the malady does not only spread by mere contagion.

It must be confessed that at the present time we have no exact knowledge of the mode of entrance of the bacillus into the body. Mr. JONATHAN HUTCHINSON has for many years been the chief upholder of the theory that the disease is associated with the ingestion of putrid fish. This theory was first brought forward by him in 1870 and has been supported by its author by a very large amount of evidence, but it has received a very lukewarm welcome from most of those interested in the subject. Still, Mr. HUTCHINSON has done so much for pathology, especially in its clinical aspects, that any theory put forward by him deserves the most careful attention and examination before it is rejected, however much it may be opposed to our preconceived ideas. On the other hand, of course it is unwise to follow blindly a teacher, however eminent, for the history of science shows many instances where distinguished teachers have led their followers out of the right road. In order to obtain further evidence Mr. HUTCHINSON has made journeys to South Africa and to India and he has now on his return from the latter country delivered at the Medical Graduates' College and Polyclinic an address in which he maintained the views which he has advocated so long.[1] At the outset it must be pointed out that Mr. HUTCHINSON'S fish theory does not require the denial of the bacterial origin of the disease, it merely attempts to indicate the precise vehicle by means of which the *materies morbi* enters the body. Mr. HUTCHINSON'S theory was originally founded on a case of leprosy occurring in a sea captain who for nearly 30 years had traded with Barbados; during his stay there, which usually lasted about six weeks, he always lived on his ship and none of the ordinary causes seemed likely to have brought about the disease. Mr. HUTCHINSON was thus led to think that some article of diet might be the cause and further consideration led him to consider that it was probably some form of fish. Further observation has merely

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[1] THE LANCET, May 23rd, 1903, p. 1464.

THE LANCET

SPECIAL SUPPLEMENT

IN SUPPORT OF THE

METROPOLITAN HOSPITAL SUNDAY FUND

Published in aid of the Appeal to be made on Sunday, June 14th, 1903.

> "The quality of mercy is not strain'd;
> It droppeth as the gentle rain from heaven
> Upon the place beneath: it is twice bless'd;
> It blesseth him that gives, and him that takes."
> *Merchant of Venice.*

THE Metropolitan Hospital Sunday Fund has entered the fourth decade of its existence and for nearly 20 years we have urged its claims for support in a Special Supplement addressed not so much to our usual readers as to that wide public without whose aid the hospitals could not continue their existence. The mercy which we seek to evoke is not of that kind which Portia sought to obtain from the usurer for his debtor, for the hospitals are not debtors to the public, but we would borrow her words, which we have quoted above, and apply them to the generous kindness of him who in the sympathy of his heart mercifully relieves the sufferings of his fellow men. To us the mercy which "blesseth him that gives and him that takes" is that thoughtful consideration for others which it is the pleasure, if it is also the duty, of all good men and women to practise, which it is their pleasure and again their duty to inculcate in their children. The exercise of such a spirit of kindness may be inseparable, even with the rich, from a certain effort at self-denial. Few can give without feeling that the money given is diverted from some other channel into which it might have flowed, possibly with more immediate gratification to the giver; but should any be slow to deny themselves in a cause where the need is so urgent and where the results are so tangible and so real? What those results are the statistics of hospital work will be found no less eloquent to show than the arguments which we have now so often repeated that many of our readers must be familiar with them. We reiterate our appeal, however, not because the contributors to the Metropolitan Hospital Sunday Fund have lacked generosity in the past or because we have lost confidence in them for the future but because the needs of the hospitals grow yearly greater as the population of London increases, largely through the influx of the labouring classes from the country, and because we therefore must aim at eliciting an increased generosity from an ever-widening circle of contributors. On Hospital Sunday the claims of the hospitals of London for support from all classes of the community are brought before worshippers of every denomination of the Christian religion in their churches and chapels and are not, we know, forgotten by those whose religion calls them to worship on a different day of the week or by those who for various reasons do not attend any place of worship at all. It is a collection made simultaneously from all and contributed to by all without regard to their religious belief or nationality, because those who give are well aware that the hospitals to which they contribute stand open by night and by day to receive Christian or Jew, Briton or foreigner, Londoner or countryman, good or bad, without distinction, only exacting from those admitted the one condition that they stand in need of aid. We had almost said that they are open to poor and rich alike, for though maintained for the poor the hospital does not close its door to the rich man or the rich man's wife or child whom accident and injury urgently calling for immediate aid may bring to its threshold. It is a collection rightly made, therefore, from rich and poor alike, and the offertories in church and chapel welcome the gifts of the poorest, while the special donations recorded in past years from wealthy givers show what an important part the generosity of the wealthy may play in increasing the total of the Fund. It will be observed how often the same names are repeated and we may be permitted to express a hope that fresh ones will appear amongst them when the results for 1903 are published.

The greater part of the Fund, however, each year is contributed by those whose offering is placed anonymously with those of their fellow worshippers in the bag or plate at the churches and chapels of the metropolis and its suburbs, and we would remind all that Hospital Sunday is a special occasion calling for a special effort. It comes but once a year; it is in aid of institutions to the existence of which money is essential, the benefits of which are conferred directly upon the poor, indirectly upon the whole community, and with regard to the beneficence of which no controversy of sect or creed can arise. If, however, we urge upon those who go to church and chapel on Sunday that they should exceed the amount of their usual contributions to the offertory, making an exception in favour of the Hospital Sunday Fund, we would once more remind them that on Hospital Sunday they should bring with them the gifts of those who, for various reasons, will not accompany them. The husband or brother to whom Sunday is a day of rest from the work of the week may spend it in seeking fresh air and healthy exercise in the country, but he should not be allowed to forget that his aid is asked for those to whom Sunday brings no rest from pain and to whom, owing to their poverty, health can only be restored by the aid of the hospital. Cycling and golf have made the

Fund lies before us. It contains the name of every place of worship which held a collection for the Fund in 1902 and we have scanned the list in vain. Surrey, Hertfordshire, Kent, Middlesex, and Essex all contribute but in respect of places more or less suburban, the great majority of them being within a radius of 15 miles from Charing Cross. We have, however, shown that patients find their way to the hospitals of London from such counties as Devonshire and Northamptonshire, Norfolk and Cambridgeshire, not one at a time but in appreciable numbers. The absence of country congregations in such circumstances from the list of the contributors to the Fund is a matter which we commend to their consideration, feeling sure that some among them will feel that it is their duty, as it will also be their pleasure, to prevent the possible suggestion that they are without gratitude for direct benefits received.

There is another point also arising out of the free reception of patients from the country by the metropolitan hospitals which thus nobly carry on their work as the great charitable institutions of the mother city. That they should so receive poor patients from the country we do not question, for it is their duty to heal the poor and we only ask for some proportional return in the way of support from the

TABLE II.—SPECIAL HOSPITALS.

Name of hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Con-valescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
	£								
City of London for Diseases of Chest.. ..	958	927	838	—	—	126	89	65,125	—
Hospital for Consumption	1,821	1,545	1,066		—	317	162	63,118	—
Mount Vernon "	671	517	540	—	100	90	8	29,772	—
Royal Hospital for Diseases of Chest ..	383	779	631		42	70	75	27,603	—
Royal National Hosp. for Consumption ..	883	907	649	—	—	161	8	—	—
Alexandra Hospital for Hip Disease ..	240	136	4	46	10	71	1	1,836	—
Banstead Surgical Home	24	131	30	64	19	17	1	—	—
Barnet Home Hospital	43	59	30	12	—	13	1	—	—
Belgrave Hospital for Children	125	205	—	—	—	—	27	12,207	—
Cheyne for Incurable "	125	64	4	4	6	50	4	—	—
East Lond. Hosp. for "	767	1,749	354	889	397	96	306	74,916	5,005
Evelina Hosp. for Sick "	287	—	—	—	—	—	—	—	—
Home for Incurable "	77	33	—	—	7	25	1	—	—
Home for Sick "	134	265	211		87	40	14	3,841	—
Hospital for Sick "	1,054	2,236	600	1,000	448	149	300	100,816	—
North-East. Hosp. for "	287	818	144	494	53	37	113	68,170	4,507
Paddington-green for "	297	589	500		150	20	69	47,057	1,038
St. Mary's for "	249	453	40	290	26	22	65	22,845	12,360
St Monica's for "	97	79	51		—	25	8	—	—
Victoria Hospital for "	460	603	126	250	511	30	66	53,885	550
Victoria Home, Margate	48	86	16	30	—	86	1	—	—
"The Vine"	43	—	—	—	—	—	—	—	—
British Lying-in Hospital	29	414	—	—	—	18	4	—	—
Clapham Maternity..	38	4'4	365		—	—	—	10,410	—
East-end Mothers' Home	77	313	313		4	19	—	3,855	—
General Lying-in	57	480	479		26	—	1	—	—
Queen Charlotte's Lying-in	479	1,271	1,271		123	—	5	8,932	—
Chelsea Hospital for Women	422	793	786		169	41	16	9,547	—
Hospital for Women	144	682	270	298	74	44	17	16,255	—
Grosvenor Hosp. for Women and Children	172	203	82	117	—	11	4	15,071	—
New Hospital for Women	307	619	—	—	—	42	21	33,568	—
Royal Hosp. for Children and Women ..	268	332	15	202	—	13	22	49,004	—
Samaritan Free	492	486	90	364	30	40	11	17,910	—
Cancer	527	732	633		21	87	94	17,820	—
London Fever	719	599	—	589	—	68	12	—	—
Gordon for Fistula	24	270	16	245	—	5	1	—	—
St. Mark's "	144	418	44	323	—	27	4	6,331	—
National for Diseases of Heart, &c.	77	154	76	5	15	22	14	16,195	—
Female Lock	307	603	502		—	101	2	2,469	—
Hospital for Epilepsy, &c.	48	—	—	—	—	—	—	9,908	—
National for the Paralysed, &c.	958	1,004	380	174	100	191	53	88,773	—
West-End for Nervous System	239	177	119	58	—	22	—	54,392	—
Central London Ophthalmic..	115	357	97	259	—	16	1	39,430	470
Royal Eye	239	629	586		—	27	—	61,658	2 533
Royal London Ophthalmic	863	1,979	—	—	12	61	3	107,491	1,697
Royal Westminster "	134	588	547	200	—	19	—	25,102	—
Western "	48	195	195	—	—	—	—	30,016	—
City Orthopædic	249	300	252		—	48	—	10,000	—
National "	125	234	—	—	—	60	—	8,761	—
Royal "	134	227	220		—	35	2	4,470	—
Royal Sea Bathing Hospital	287	1,172	320	112	—	116	7	—	—
St. John's Hospital for Diseases of Skin..	57	259	—	—	—	23	1	36,300	—
St. Peter's for Stone	96	481	456		—	22	25	41,759	—
Central London Throat and Ear	48	339	323		5	8	3	48,318	—
Hospital for Diseases of Throat..	249	773	729		11	25	8	45,557	—
London Throat	29	660	658		4	14	1	14,827	—
Metropolitan Ear and Nose..	29	294	—	—	—	—	—	9,594	—
Royal Ear	19	231	231	—	—	—	—	7,284	—
Dental	144	—	—	—	—	—	—	77,420	—
National Dental	38	—	—	—	—	—	—	27,817	—
	£17,001	30,873	5,857	6,125	2,450	2,610	1,636	1,483,330	28,160
Estimated to supply omissions	—	883	5,988	8,205	377	154	165	33,046	5,382
Total	£17,004	31,756	11,845	14,330	2,827	2,764	1,801	1,516,376	33,542

country. There are, however, persons who believe that the best way to make all hospitals efficient and solvent would be to support them by rates collected under the sanction of laws passed for that purpose. Let us consider what the result of having rate-supported hospitals only would be upon the free admission of country patients to hospitals in London. The answer is a perfectly simple one. It would put an end to it. It is quite possible, no doubt, that under a system of rate-supported hospitals rules might be framed to permit the patient from the rate-supported hospital in the country to pass to the rate-supported hospital in London, in consideration of duly apportioned payments, but to those who are versed in the ways of local officials, and in the necessary restrictions which limit the exercise of their discretion and delay their actions, we would leave the consideration of how such a system would work in practice. There would have to be presumably in all cases of patients admitted to a hospital, or seeking admission, inquiries, such as are now often necessary under the Poor-law, to discover the original home or most recent domicile of each patient and these inquiries would sometimes lead to disputes on the subject to be settled only by litigation. There would be difficulties arising out of the transfer of patients seriously ill or injured, discussions as to charges for the tending of patients coming from alien districts, and all the questions that auditors are compelled to raise where the lawful expenditure of public moneys is under their scrutiny. On the other hand, the hospitals which in London and throughout the kingdom are supported by voluntary contributions are fettered by no red-tape, and their patients are admitted without being subject to geographical restrictions or being compelled to establish a legal right to the satisfaction of jealous custodians of a local exchequer.

TABLE III.—COTTAGE HOSPITALS AND CONVALESCENT HOMES

Name of hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out patients' visits	Accidents and emergencies
	£								
Metropolitan Convalescent	671	3,989	1,171	2,556	—	104	4	—	—
Bexhill "	383	2,304	711	1,420	—	31	4	—	—
All Saints "	383	3,203	1,048	1,278	—	65	2	—	—
Ascot Priory "	67	233	—	—	—	—	1	—	—
Charing Cross Hospital Convalescent	86	538	—	—	—	22	—	—	—
Chelsea Hospital for Women Convalescent	48	263	250		—	13	1	—	—
Deptford Medical Mission Convalescent	29	—	—	—	—	—	—	—	—
Mrs. Gladstone's Convalescent	48	539	—	—	—	—	—	—	—
Friendly Societies "	38	767	—	—	—	—	—	—	—
Hahnemann "	38	215	165	14	—	32	—	5,135	—
Hanwell "	19	225	—	—	—	—	—	—	—
Herbert "	19	470	260	152	—	44	—	—	—
Herne Bay (Baldwin-Brown) Convalescent	29	350	—	—	—	—	—	—	—
Homœopathic Convalescent	19	169	169	—	—	—	—	—	—
King's College Hospital Convalescent	173	336	81	231	—	7	1	—	—
Mrs. Kitto's Convalescent	67	302	—	—	—	—	—	—	—
Mary Wardell "	105	161	—	151	—	11	—	—	—
Morley House "	211	977	—	—	—	49	3	—	—
Police Seaside Home	58	604	—	—	—	—	—	—	—
St. Andrew's (Clewer) Convalescent	134	—	—	—	—	—	—	—	—
Do. (Folkestone) "	240	1,853	1,782		—	69	2	—	—
St. John's Home for Convalescent Children.	67	852	352		—	—	—	—	—
St. Joseph's Convalescent	62	637	489	131	—	50	3	—	—
St. Leonards-on-Sea "	115	773	—	—	—	—	2	—	—
St Mary's "	17	110	110		—	7	—	—	—
St. Michael's "	49	212	—	—	—	—	—	—	—
Seaside "	96	—	—	—	—	—	—	—	—
Warley "	10	89	—	—	—	—	—	—	—
	67	—	—	—	—	—	—	—	—
Hospital	77	154	24	97	3	15	11	3,496	4
	105	375	43	285	7	24	13	—	136
	48	126	9	99	—	8	5	—	—
	48	130	38	85	50	—	4	5,037	—
	58	—	—	—	—	—	—	—	—
[illegible] "	48	154	20	115	—	9	7	—	3
Enfield "	58	166	11	180	—	12	10	—	33
Epsom and Ewell "	62	106	6	81	20	8	1	—	—
Hounslow "	29	153	26	107	—	11	9	—	275
Livingstone "	86	165	7	130	—	17	11	—	60
Mildmay "	88	186	35	102	5	23	18	—	—
Reigate and Redhill "	86	376	88	214	—	22	11	—	61
Sidcup "	88	130	24	91	3	8	4	261	26
Tilbury (Passmore Edwards) "	38	—	—	—	—	—	—	—	—
Willesden "	86	243	26	172	7	21	24	—	76
	53	141	28	98	—	7	5	50	25
	43	81	25	30	5	10	6	—	16
	105	184	14	157	—	9	4	—	—
	115	135	46	65	—	21	8	—	—
	86	277	—	—	—	64	—	—	—
	48	200	70	107	4	17	2	—	—
[illegible] Home	19	59	—	—	—	18	16	—	—
[illegible]	29	42	20	—	—	12	0	—	—
	288	119	12	3	—	31	82	—	—
	38	96	17	48	—	26	—	—	—
	—	72	32	33	—	—	2	27,792	—
	48	48	—	—	—	18	—	—	—
	96	285	54	173	—	26	22	—	—
	£5,221	23,914	4,684	8,390	103	939	302	41,831	715
Estimated to supply omissions	—	1,990	4,050	7,045	—	309	45	5,374	—
Total	£5,221	25,904	8,704	15,435	103	1,248	347	47,205	715

THE TAXATION OF PLEASURE.

Not all, however, of those who neglect the Hospital Sunday Fund would be affected by the institution of a hospital rate. Among those who are not ratepayers there are, no doubt, many who do not give because they have an idea that their help would be insignificant. To these we would say that no help is insignificant, whether it comes in pounds, shillings, or pence. The population of the administrative county of London exceeds 4,500,000. The population of London and its suburbs within a radius of 15 miles from Charing Cross exceeds 6,500,000. If by rich and poor contributing according to their means throughout this vast mass of humanity that has gathered itself in and round the metropolis an amount equal to 6*d*. per head were to be collected the average total of the Hospital Sunday Fund would be more than trebled. The amount suggested may seem excessive. Perhaps it will be long before such universal recognition of the hospitals' need by all classes can be obtained. Is it, however, beyond the limits of possibility? In the sum of the population given women and children are included, the destitute out-of-work, and the "submerged tenth." It must be remembered, however, that every sum of £1000 represents 40,000 sixpences and that every sovereign means 40 sixpences, and every half-crown five. The labourer who on a scanty and precarious wage struggles to support a growing family, who spends nothing

TABLE IV. – DISPENSARIES.

Name of dispensary.	Hospital Sunday Fund award.	Out-patients' visits.
Battersea Provident	£102	—
Blackfriars „	18	6,572
Bloomsbury „	14	5,698
Brixton, &c.	58	20,818
Brompton Provident	21	2,514
Camberwell „	83	83,516
Camden Town „	18	8,187
Chelsea, Brompton, and Belgrave Provident	50	16,459
Chelsea Provident	14	2,778
Child's Hill Provident	12	—
City	101	21,583
City of London and East London	27	92,167
Clapham General and Provident	29	12,898
Deptford Medical Mission	24	—
Eastern	48	21,612
East Dulwich Provident	38	20,736
Farringdon General	53	14,794
Finsbury	53	80,209
Forest Hill	45	25,753
Greenwich Provident	28	12,250
Hackney „	14	11,347
Hampstead „	48	41,459
Holloway and North Islington	63	22,139
Islington	60	56,681
Kensal-town Provident	12	4,019
Kensington	72	10,488
Kilburn, Maida-vale, and St. John's-wood	46	3,931
Kilburn Provident Medical Institution	35	23,978
Leman-street Provident	—	—
London	18	—
London Medical Mission	120	32,482
Metropolitan	55	32,110
Notting-hill Provident	11	8,987
Paddington „	35	7,673
Portland-town	30	2,993
Public	50	2,253
Queen Adelaide's	20	16,157
Royal General	30	—
Royal Pimlico Provident	59	—
Royal South London	48	15,002
St. George's and St. James's	58	4,000
St. George's (Hanover-square) Provident	35	2,900
St. John's-wood Provident	42	27,875
St. Marylebone General	38	14,209
St. Pancras and Northern	35	—
South Lambeth, Stockwell, & North Brixton	52	11,411
Stamford-hill, Stoke Newington, &c.	69	38,678
Tower Hamlets	48	10,851
Walworth Provident	15	5,704
Wandsworth-common Provident	10	4,305
Westbourne Provident	16	10,216
Western	67	19,052
Western General	144	—
Westminster General	42	29,080
Whitechapel Provident	30	24,618
Woolwich „	14	—
	£2,382	888,169
Estimated to supply omissions	—	189,118
Total	£2,382	1,077,287

PROGRESS OF THE METROPOLITAN HOSPITAL SUNDAY FUND.

Year.	Totals.	Donations.	Year.	Totals.	Donations.
1873	£27,700	£1844	1888	£40,379	£3080
1874	29,936	1505	1889	41,744	3482
1875	26,396	1424	1890	42,814	3991[5]
1876	27,042	1339	1891	45,330	9019[6]
1877	26,082	947	1892	41,512	4429[7]
1878	24,904	1199	1893	39,290	3652[8]
1879	26,501	1120	1894	43,679	7717[9]
1880	30,423	1567	1895	60,361	21,990[10]
1881	31,856	1638	1896	46,035	3582[11]
1882	34,146	2106	1897	41,003	2351[12]
1883	33,935	1980	1898	40,397	2617[13]
1884	39,329	6410[1]	1899	53,504	15,310[14]
1885	34,320	2555[2]	1900	51,993	14,657[15]
1886	40,399	4817[3]	1901	54,731	18,343[16]
1887	40,607	4130[4]	1902	62,669	16,307[17]

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[1] In 1884 £4500 was received from the managers of the International Health Exhibition.

[2] In 1885 a special donation of £1000 was received from Dr. James Wakley, Editor of THE LANCET.

[3] In 1886 a further special donation of £1000 was received from Dr. James Wakley.

[4] In 1887 a legacy of £1000 was paid by the executors of the late Dr. James Wakley.

[5] Including legacy of £1003 14*s*. from the executors of the late Mr. Thomas Crouch.

[6] In 1891 donations of £5000 from the late Duke of Cleveland, &c., and £1000 from Sir Savile Crossley, Bart., were received.

[7] In 1892 Sir Savile Crossley gave a further £1000; and a legacy of £105 was paid by the executors of the late Dr. H. E. Price of Brighton

[8] In 1893 Sir Savile Crossley gave a further donation of £1000.

[9] In 1894 a legacy of £5000 (less duty) was paid by the executors of the late Mr. W. J. Whitaker, and Sir Savile Crossley gave a further donation of £1000

[10] In 1895 Messrs. Barnato and Friends gave a donation of £10,000; £3400 was received from the Stock Exchange through Messrs. Pym, [illegible]dett and Harris; Lord Iveagh gave a [illegible] ley gave a further donation of £1000; [illegible]

[11] In 1896 Sir Savile Crossley gave his sixth donation of £1000, and legacies were received from Mr. John Smith of £500 and Mrs. May Evans of £172 9*s*. 4*d*.

[12] In 1897 Sir Savile Crossley gave his seventh donation, amounting this year to £500.

[13] In 1898 Sir Savile Crossley gave his eighth donation, amounting this year to £500.

[14] In 1899 Mr. George Herring gave £10,000; Mr. J. Lane Densham gave £1050; and Sir Savile Crossley gave his ninth donation of £500.

[15] In 1900 Mr. George Herring gave a further donation of £10,000; and Sir Savile Crossley gave his tenth donation of £500. An anonymous donor, "F. H.," gave £1000; and £1090 were received from the estate of the late Thomas King.

[16] In 1901 Mr. George Herring gave a further donation of £10,000, and Sir F. Cook, Bart., M.P., gave a donation of £4000

[17] In 1902 Mr. George Herring gave a further donation amounting to £11,575, and Mr. Charles Morrison gave a donation of £1000.

SUMMARY OF TABLES

—	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
General Hospitals	£33,202	71,314	22,563	35,690	7,433	4,490	6,544	2,384,190	371,851
Special Hospitals	17,004	31,756	11,845	14,330	2,827	2,764	1,801	1,516,376	33,542
Cottage Hospitals and Convalescent Homes	5,221	25,904	8,764	15,435	103	1,248	347	47,205	715
Dispensaries	2,382	—	—	—	—	—	—	1,077,287	—
Total	£57,809	128,974	43,172	65,455	10,363	8,511	8,692	5,025,058	406,108

save on the bare necessaries of life, may not be able to contribute 6*d.* for himself and a similar sum for each of those dependent on him. But what of the more or less independent working-man not so burdened in these days of high wages and cheap necessaries? What of the man or woman who has money to spend on pleasures or small luxuries? Does the pint of beer or the ounce of tobacco, the article of personal adornment, or the visit to a music-hall cost nothing? We do not suggest that these should be given up. We merely point out that 6*d.* or 1*s.* deducted from what is spent on these during 12 months and devoted to the benefit of the hospitals would hardly be remembered in looking back on the year's pleasures or would be recalled with a keener sense of gratification than the other items in the account. Even the errand boy might in such a cause save 6*d.* from what he reserves usually for cigarettes (alas) and penny ices without depriving himself of any wholesome form of enjoyment, if not to the direct benefit of his health. In addressing these, the working man and woman, and the wage-earners of all ages who perhaps cannot, as a rule, afford to give purely for charity and the sake of others, we would remind them that it is to them that the hospital opens its doors in the day of their adversity and we would appeal to their sense of gratitude and of independence. We feel sure that if they reflected upon the subject they would be unwilling to be beholden to charity when in sound health and that they would gladly feel when compelled by necessity to accept hospital aid that they had themselves contributed to place such aid within their own reach. To others in easier financial circumstances the taxation of their pleasures would come even more appropriately. As a nation we spend a good deal on pleasure and to some of us luxuries have grown to be almost necessities. A taste for healthy exercise pervades our young people and the milder forms of athletic amusement are retained by many far beyond middle age. These are not all the monopoly of the wealthier class, although some of them may be The bicycle, for example, like the theatre among sedentary diversions, has its devotees among those of comparatively small means and few confine themselves to one form of amusement only. A twentieth part deducted from the money spent upon amusement during a year by most of us would constitute a sum well worth adding to the offertory on Hospital Sunday. It would considerably exceed the 6*d.* to which we would like to see the amount per head of the population raised, and every 6*d* above the first would be a contribution on behalf of one of those to whom giving at all must be admitted to be impossible. No one would deny amusement to their neighbours, least of all to those who seek it as a recreation after toil. No one grudges them the health which recreation brings, not even those who in their beds in hospital wards long for the day when their own health will return But it is to the hospital alone that these can look for health that means more than amusement to them, and it is to the healthy, the young, and the vigorous that we appeal for a more substantial token of sympathy than a passing thought.

Those who themselves have suffered will know what pain means in whatever surroundings it has to be endured and so will those who have seen those dear to them suffer. These, too, will remember the debt that they owe to the hospitals in respect of the aid which physician or surgeon has afforded them—to the hospitals without which the nurse who tended them could not have acquired her training. The debt which the public owe to the hospitals in respect of the training of nurses is in itself no small one

Among those who otherwise might contribute to the Metropolitan Hospital Sunday Fund there are some, perhaps, who have an idea that although the hospitals assist in the progress of science and although patients may incidentally grow well under hospital treatment who would not otherwise do so, these institutions are really little more than scientific laboratories on a large scale where medical men and nurses receive their training with patients as useful object lessons; that they are not places where human sympathy for suffering, as well as care, is shown, so much as wholesale establishments for the practice of surgery and medicine with the necessary nursing controlled by a cut-and-dried routine. We would ask any who may hold these opinions to read a few letters which we publish below *verbatim et litteratim*, only omitting all names, because they were not written for publication. They were handed to our representative at his request by various sisters in a large hospital standing in a poor and densely crowded neighbourhood, and the spontaneous expressions of gratitude and friendly feeling which they contain need no further comment or introduction from us. Such letters are received daily at hospitals from recently discharged patients and often from those who have left the institution for some time but who still cherish a grateful memory of the kindness bestowed upon them. We could have collected hundreds more without any difficulty. It will be observed that the first speaks of an operation performed in the hospital which enabled the writer to enter and to serve in the Royal Navy.

H.M.S. L—— Devonport, Devon.

DEAR SISTER,—I hope you are quite well as it leaves me at present I am writing to let you know that I have joined the Navy about a mounth ago I am now stationed at Devonport on the L—— for the last 3 weeks I have been on H.M.S. I—— further up the harbour I like the Navy very well I passed alright after the opraition in your ward in —— hospital I shall be up on leave about June or July 24 when I shall come and see you I would be pleased if you would remember me to nurse F—— and the night nurse who was there when I was I think this is all this time.

I remain yours truly

Patient W. G.

I thank you fore all your kindness to me while in the hospital.

Convalesent Home,

——,

May 10th, 1903

DEAR SISTER,—Just these few lines to you I really must apologise to you for not writing to you before now I was very sorry that I could not see you before I went away. But it was very early in the moring wen I went away Dear sister I now take the pleasure in writing these few lines to you as I do now you would like to hear from me Hoping this will find you in the best of health pleace god as this leaves me geting along beautiful and also Hoping these will fine all you patients doing well also please god I am very glad to say that this is a beautiful Convalesent home and it is in a beautif place Close by the seaside I am propły injoying myself down hear I think I have got another three weeks to do down hear and then I do come back again I must tell you that we have got beautiful weather down this way I must tell you that I have been out boat sailing since I have been down hear and it is allright Dear Sister if you pleace give my best regards to all the Nurses for me if you pleace and I wishes to be remember to all the Ward mates also if you pleace So good by to you and god bless you and may god be with you always

I Remain your Inquiring Friend

W.

Hoping to hear from you and also for your patients

——,

Nov. 12th, 1902.

DEAR SISTER,—Just a line to inform you that my Wife Mrs. B—— who is now staying at the —— Convalescent Home is slowly but surely recovering her health I can assure you that I cannot find words to express our hearty thanks for the noble manner in which you and the Nurses under your care have striven to bring her around after her serious operation I am sure the kind words you had spoken to her during her illness has helped her towards her rapid recovery she speaks of nothing but praise for every one in connection with the Hospital and we both sincerely hope that the Hospital will continue to prosper as a blessing to those poor sufferers who needs its help.

With kind regards
I remain sincerly yours
Sister R—— M. B——.

Convalescent Home,
—— ——,
24 of July.

DEAR SISTER,—I was very glad that E. g. arrived safely at the institution and he gave me a sixpence and I thank you with all my heart your the Best friend I have got in London and my time is up and I will Be home next week and I dont no what to do Dear Sister and I will leave It to you you are the only one dear sister that I can depend on

yours sturly,
S T.

and E G sends his Best regard and I give my kind regards to the matron.

TO THE CHILDREN.

All those who have children whom they love and cherish in comfortable homes must at times give a thought to those little ones who are brought up in far different surroundings. Children may do much in collecting for the Metropolitan Hospital Sunday Fund and in bringing the sum received to the Sunday collection. They will perhaps do so the more readily when they are assured that there are little ones to whom a hospital is not a place of pain and suffering at all, but the one bright place that they have ever known in which loving care has been lavished upon them, and which they leave with sorrow and would gladly return to.

In conclusion, we would urge upon all to give liberally and to persuade others to do the same, wherever persuasion may be needed. Last year the Fund reached the fine total of £62,669, but £100,000 were aimed at and this year we shall hope to see an increase. Mr. George Herring, whose princely generosity to the cause of the suffering poor in the past four years is beyond all words of praise, has again repeated his offer of giving £10,000 to the Fund, or one-fourth of the whole amount collected, provided that this does not exceed £100,000. Last year the depression caused by King Edward's severe illness and operation, with the postponement of the Coronation ceremony, lay heavy upon the hearts of the people. This year they see their monarch restored to health, strengthening the friendly terms that bind his nation to others abroad, and performing his arduous duties at home with the energy and activity that have always been characteristic of him. His Majesty's interest in all that affects the welfare of the hospitals, for which he has himself inaugurated the Fund which bears his name, is too well known for us to need to dwell upon it. With their King and their Queen in good health, and in the first summer since their Coronation Londoners are enjoying one of the gayest and most prosperous seasons that they have ever seen. At such a time it is possible that the struggle for existence of the hospitals may be forgotten; to us it would seem to be a time at which more than at all others their needs should be remembered.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

Amounts received and disbursed in the year 1902.

Dr.

RECEIPTS *for the year ending 31st October, 1902.*

1902.	£	s.	d.	£	s.	d.
To Balance at Bank of England, 1st Nov., 1901	1,910	1	3			
,, Balance in hands of Secretary	5	12	5			
				1,915	13	8
,, Collections made at Sundry Places of Worship	46,331	2	5			
,, Collections at Schools	31	5	10			
,, Donations	14,652	19	1			
,, Donations for Surgical Appliances	14	19	0			
,, Dividend on Consols	15	10	0			
,, Interest on Deposit...	94	5	11			
,, One year's interest on Legacy of £10,000 from the late Herbert Lloyd	282	10	0			
,, Dividend on £45,346 1*s.* 3*d.* 2¾ Consols, per Executors to the Will of W A. Guesdon, deceased	1,247	0	4			
				62,669	12	7
,, Sale of Consols				476	4	0
				£65,061	10	3

Cr.

PAYMENTS *for the year ending 31st October, 1902.*

1902.	£	s.	d.	£	s.	d.
By Awards to 137 Hospitals	54,432	1	1			
,, Awards to 10 Institutions	864	19	8			
,, Awards to 55 Dispensaries	2,381	9	2			
,, Surgical Appliances	2,781	17	9			
				60,460	7	8
,, Rent	170	0	0			
,, Furniture and Repairs	4	0	0			
,, Fuel, Gas, and Office Cleaning	25	2	10			
,, Printing and Stationery	200	13	11			
,, Stamps and Postages	81	5	6			
,, Advertisements...	281	17	9			
,, Salaries and Gratuities	1,067	12	6			
,, Pension to late Secretary (½-year)	125	0	0			
,, Special Appeal	706	5	1			
,, Sundries	5	1	3			
				2,666	18	10
,, Balance at Bank of England, 31st Oct., 1902	1,910	6	10			
,, Balance in hands of Secretary	23	16	11			
				1,934	3	9
				£65,061	10	3

Audited and found correct, this 13th day of November, 1902.

(Signed) W. H. PANNELL & Co., *Chartered Accountants*, 13, Basinghall-street, E.C.

*** In the preparation of the voluminous statistics of hospital work which have been here digested and exhibited in collected form (and which have been specially supplied to us in response to our applications, and are quite independent of any returns made to the Metropolitan Hospital Sunday Fund Committee) we have been greatly indebted to a large number of secretaries and other officers of the various medical charities of the metropolis. *To them we desire, as on many previous occasions, to tender our sincere thanks.*—ED. L.

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resulted in confirming this opinion and his visits to South Africa and India were undertaken for the purpose of investigating statements apparently contradictory to this hypothesis.

In one particular Mr. HUTCHINSON has modified his theory. He acknowledges that the disease may be transmitted by "commensalism"—that is to say, leprosy may be communicated by any food when the food has become infected by the leper's hands. At Lahore Mr. HUTCHINSON saw a baker among the out-patients at the hospital whose hands had leprous ulcers on them. In this way infection could doubtlessly take place and children are especially ready to receive food from others, even from infected hands. The three main objections to the fish theory have been that in the first place many persons habitually partake of fish but do not contract leprosy; in the second place, that leprosy occurs in districts where fish is unknown; and, thirdly, that by their religion certain sects are forbidden to eat fish and yet many of their members become leprous. These objections Mr. HUTCHINSON sets himself to answer. The first difficulty he surmounts by saying that it is not all fish that will, in his opinion, cause leprosy but only badly cured fish; it is not the excessive use of fish but the accidental reception of a specific ingredient which brings about the disease. The second objection is at first sight of more importance. Writer after writer has roundly asserted that leprosy is found, and that extensively, in districts where fish does not exist—where, in fact, it is impossible to obtain fish. There were two districts in India in which Mr. HUTCHINSON was informed that no fish was eaten, for no fish existed. These were the Chota Nagpur district and the sub-Himalayan country. Mr. HUTCHINSON was assured by men who had lived in the neighbourhood that in the Chota Nagpur district leprosy was prevalent but no fish was obtainable, yet when he visited this district he found that fish was an article of diet in the leper asylum itself and that many of the patients considered that their leprosy was caused by eating fish. In the markets fish was exposed for sale. In those parts of the sub-Himalayan district which were visited by Mr. HUTCHINSON fish was plentiful. Thus Mr. HUTCHINSON claims that one great objection to the theory falls to the ground. The religious difficulty at first sight seemed to be more formidable, but although Hindus will acknowledge that it would be better from a religious point of view for them to abstain from fish, yet the majority eat fish readily and, in fact, Mr. HUTCHINSON was able to find only one man affected with leprosy who absolutely denied ever having tasted fish and he asserted somewhat naively that his reason for not eating fish was that he did not like the taste of it. There is, however, a very strict religious sect in India, the Jains; they are few in number but they are utterly averse to taking life in any form and therefore it may be accepted that it is extremely unlikely that any Jain would ever eat fish, and Mr. HUTCHINSON was unable to find anyone who knew of a Jain affected with leprosy. In an island named Salsette, near Bombay, leprosy is increasing and it is interesting to note that most of the inhabitants of this island are Roman Catholics and therefore they are in the habit of eating fish very regularly. The objection formed on religious injunctions against fish-eating has been weakened by these investigations of Mr. HUTCHINSON and mere general statements that the religious tenets of a sect forbid the eating of fish cannot be allowed to outweigh the direct evidence that fish is eaten.

There is another point that needs to be considered. In India and many other parts of the world various diseases are confused with leprosy, and chief amongst these, as Mr. HUTCHINSON has shown, is leucoderma; therefore the statement that a person is leprous must not be taken as necessarily true unless we can be certain that the observer was aware of this confusion and competent to diagnose the disease. Syphilis and psoriasis are also frequently confused with leprosy.

A careful examination of Mr. HUTCHINSON'S evidence will convince most people that there is something to be said in favour of his theory. It cannot, however, be held to be proved until the bacillus lepræ has been shown to be present in fish, and stress was laid on this point by Dr. H. RADCLIFFE CROCKER at the adjourned discussion on Mr. HUTCHINSON'S paper. It is not at all improbable that an intermediary host may be necessary, as is the case with many of the intestinal parasites. Nevertheless, though at present the theory is only a theory, it is well worth while for general hygienic reasons to attempt to improve the preservation of the fish eaten in countries where leprosy is prevalent such as India and the chief method to this end is the reduction of the salt duty which militates greatly against its thorough use in the preservation of fish. Whether we accept Mr. HUTCHINSON'S theory or not we must express our admiration of his energy in undertaking journeys of many thousands of miles for the purpose of advancing our knowledge of disease and its cause.

Annotations.

"Ne quid nimis."

THE ROYAL MEDICAL BENEVOLENT COLLEGE.

WE would remind our readers that the twenty-ninth festival dinner of the Royal Medical Benevolent College will be held at the Hotel Cecil on Wednesday, June 10th, at 7 P.M. H.R.H. the Prince of Wales has graciously consented to take the chair and it is to be hoped that he will be supported on this occasion by an influential number of the friends and supporters of the charity in question. We need not plead in many words for support for Epsom College. The members of the medical profession know perfectly well the benefits which this society can give to themselves, their widows, and children. Moreover, the College supplies an admirable education which is open to the children of any man, whether he be medical or not. We will simply add that in England alone there are over 20,000 medical men and that if only each one of these would subscribe 10s per annum to the Royal Medical Benevolent College its present anxieties would be largely lightened and its power for doing good would be very greatly increased.

MIDWIVES AND STILLBORN CHILDREN.

IN THE LANCET of April 25th (at page 1200) and of May 9th (p. 1338) the subject of certificates of stillbirth given by midwives in Manchester was mentioned in connexion with a case investigated by Mr. L. J. Aitken, the then acting coroner. It was shown that at the lowest computation 500 infants must be buried in the Manchester cemeteries as stillborn every year, while Mr. Aitken's calculations put the number as high as 1500, and that, as he said, "we have not a single guarantee that every one of these has not lived." Jessie Donough, aged 32 years, the midwife whose proceedings had been in question, was placed in the dock before the Recorder of Manchester on May 25th and pleaded guilty to making a false statement that a child who was born alive had been stillborn. The child had lived one and a half days. "The Recorder said he hoped the sentence he passed would be a lesson to others and ordered the prisoner to go to prison with hard labour for 12 months." Much credit is due to Mr. Aitken for his investigation into this matter, for the proceedings of unscrupulous midwives may largely influence the rate of infant mortality.

TOILET AMMONIA.

COMPARATIVELY strong solutions of ammonia are commonly sold now for domestic purposes, it may be for the bath or for removing grease stains. We have nothing to say against their employment for either object and certainly the use of a few drops of ammonia in the bath is harmless while it is both invigorating and cleansing. It must be remembered, however, that ammonia gas is after all a poison, strong ammonia vapour being fatal to both animal and vegetable life. In most cases the examples of poisoning by ammonia vapour that appear in toxicological records have been the result of an accident. Thus the ammonia bottle has been injudiciously applied to the nostrils of persons in the throes of an epileptic fit and death has resulted. There is also an instance on record of poisonous effects resulting from the breaking of a bottle of ammonia and the sudden evolution of the powerful gas from the spilt liquid. In the bath-room such an accident might easily happen and the public should be enjoined to use the liquid with great care. A spilt bottle of ammonia in the bath-room might easily cause serious shock. A warning, it seems to us, should be printed on the labels of all bottles containing ammonia for domestic purposes, that the vapour is poisonous in large quantities and that special care should therefore be exercised to prevent the wholesale escape of the contents.

THE MEDICAL PROFESSION AND ST. LUKE'S DAY.

A CORRESPONDENT writes to remind us of the fact that this year St. Luke's Day, Oct. 18th, falls on a Sunday. He refers to the fact that the annual service which is held in St. Paul's Cathedral under the auspices of the Guild of St. Luke and also the special services which have been held in Liverpool on or near the same date afford an opportunity of combined worship as a profession to the medical men of London and of Liverpool. He goes on to ask, "Is it too much to hope that the example set by London and Liverpool may be followed this year in other towns and cities?" He points out that St. Luke's Day falls in what may be called "the medical month," when medical schools and medical societies commence their winter session. Most medical practitioners also are at home, having returned from their well-earned holiday, and to many of them life is a round of wearisome duty with little to brighten it, while the efforts which they have to make to earn a livelihood are becoming more difficult every year. It is well, therefore, continues our correspondent, that every member of the medical profession should periodically be reminded of the Divine Exerciser of the healing art, of Luke the beloved physician, and of the respect in which members of the medical profession are held by the clergy. He goes on to point out that services such as these offer an opportunity to members of the medical profession who cannot afford a guinea to subscribe some smaller sum to medical missions or to the benevolent societies of the profession. We think that our correspondent's idea is a good one. The meeting together of the members of the medical profession in common worship is an additional bond of union between men who are, or should be, actuated by one idea—viz., to benefit their fellow creatures by the exercise of their skill. We do not for one instant imply that a medical men should exercise his profession purely for the love of his fellows, for in the medical profession no less than in any other the labourer is worthy of his hire, but in the large towns of this land the carrying out of the suggestion of our correspondent would, we think, work for the good both of medical men and of their patients.

THE FIRE AT ETON COLLEGE.

THE terrible disaster which has cast a gloom over that great school which was about to celebrate its yearly festival was apparently due to one of those heart-rending calamities of which no definite explanation can be given. The house in which the fire broke out was old and irregularly built but no evidence was adduced at the inquest to show in which room the fire originated, neither has the cause of the fire been ascertained. The saddest point in the story is the apparently indisputable fact that the boy Horne's life would have been saved had not the windows of his room been barred, but in Lawson's case death seems to have overtaken him in his sleep. It is, however, comforting to think that both deaths were due to suffocation and not to shock by fire. With the recommendation of the jury as to the removal of all bars from windows we most thoroughly agree. If any protection is necessary for disciplinary or other purposes it seems to us that wire-netting such as is used for rabbit-fencing would answer every purpose. Such netting could easily be cut or broken on emergencies and would be quite strong enough to prevent any boy getting out of his window, either purposely or in a state of somnambulism, which condition has always to be thought of. The window of Horne's room opened on to a balcony over a bay window and a fall from this would at any rate cause serious injury. That two young lives should have been thus prematurely cut off is sad in the extreme and we can but offer our sympathy to the parents of the dead, quorum animabus propicietur Deus, to Mr. Kindersley the house-master, and to the school as a whole upon the calamity which has darkened the summer half of 1903.

THE DISTRIBUTION OF PLAGUE.

As regards Cape Colony the acting medical officer of health states that for the week ending May 9th the condition of the various places mentioned below was as follows. At the quarantine station, Saldanha Bay, 2 Asiatic males remained under treatment in the hospital, both being convalescent. At Port Elizabeth 5 cases of plague were discovered—namely, 1 European female on May 3rd, 1 native male (found dead) on the 4th, 1 European male on the 5th, 1 native male (found dead) on the 7th, and 1 European male (found dead) on the 9th. At the Plague Hospital, Port Elizabeth, 2 native males were discharged recovered, leaving 13 cases under treatment. Plague-infected rats continued to be found in the town during the week. At East London 4 cases of plague were discovered—namely, 1 native male (found dead) on May 5th, 1 native male on the 6th, 1 European male on the 7th, and 1 native male on the 9th. At the Plague Hospital 1 European male died during the week and 1 native male was discharged recovered, leaving two cases under treatment. (Note.—Owing to a telegraphic error 2 cases instead of 1 were shown in the report for the week ending May 2nd as having been admitted to hospital. The native male discovered on April 30th was the only case admitted to hospital during the week. 1 patient remained in hospital under treatment at the end of the week.) At King William's Town 3 cases of plague were discovered, namely, 1 native male (found dead) on May 3rd, 1 European female on the 7th, and 1 native male on the 9th. At the Plague Hospital 1 European female died during the week, leaving 6 cases under treatment. At Graaff-Reinet no cases of plague and no plague-infected rats were discovered. At Burghersdorp 1 plague-infected rodent was discovered. At Queenstown plague-infected rats were discovered on the railway station premises. As regards the Mauritius a telegram from the Governor received at the Colonial Office on May 29th states that for the week ending May 28th there was 1 fatal case of plague.

THE WORK OF THE IMPERIAL INSTITUTE.

FOR ten years we have waited for some evidence that the Imperial Institute would justify its existence. We have watched the fading of that "regally gorgeous" colouring which the ideal of British brotherhood, as realised at South Kensington, presented to the astonished gaze of the world at large, and we have followed with appropriate concern the unsuccessful efforts of those in authority to run the institute as a club or a tea garden. The poetry of the Imperial conception may be said to have finally disappeared when in 1900 the Government took possession and handed over to the University of London a large part of the actual buildings. In January last, through the agency of an Act passed in July, 1902, the institute was transferred to the care of the Board of Trade. With the assistance of an advisory committee, upon which are also represented India, the colonies, and the Board of Agriculture, Sir Alfred Bateman, K.C.M.G., now directs its fortunes, and, shorn of its former glories, the institute has sunk to the indignity of becoming a mere branch of the commercial, labour, and statistical department. As a result of these proceedings our patience has at last been rewarded, for there has just appeared the first "Bulletin of the Imperial Institute." Professor Wyndham R Dunstan, F.R.S., the director, was at one time at the head of the research laboratories of the Pharmaceutical Society of Great Britain and we are therefore not surprised to find that although commercial matters receive chief attention in the bulletin there is yet much of medical interest. Several drugs and allied materials have been subjected to examination by the scientific workers whom Professor Dunstan controls, with, it is claimed, results of permanent value. Thus *Podophyllum Emodi*, a plant common in Northern India, has been shown to be chemically very similar to the familiar *Podophyllum peltatum*. The therapeutical effects of the drug were studied by members of the St. Thomas's Hospital staff and they concluded that it constituted an efficient substitute for the latter species. It may be noticed in passing that these opinions are somewhat in conflict with the views of earlier investigators. An examination was also made of an Egyptian plant—*Hyoscyamus muticus*—and this also is said to have been proved to be of service, though in exactly what capacity is not clear. The chemical composition of certain oil-yielding nuts from Brazil, Portuguese East Africa, and British Honduras has been ascertained, while some useful information seems to have been gleaned as to the poisonous effects on horses and cattle of some Indian and Colonial fodder plants. There is also another field in which an attempt has been made to further medical progress. Office room has been provided for the Colonial Nursing Association—a body which selects trained hospital and private nurses for the Crown colonies and other British dependencies. There are, therefore, not wanting signs of vitality on the part of what is left of the institute and possibly in the future the scope of its operations may become as great as was hoped for when first the idea of its establishment took shape.

THE CENTRAL MIDWIVES BOARD.

Dr. J. Ward Cousins has kindly forwarded to us a copy of the minority report, signed by himself, by Dr. W. J. Sinclair, and by Mr. E. Parker Young, respecting the draft rules framed by the Central Midwives Board. As, however, the draft rules in question have not as yet obtained the approval of the Privy Council, as required by the Midwives Act, they are so far not available for comment and we consider that without them it is impossible to discuss the modifications proposed by the signatories of the minority report. When the rules have obtained the approval of the Privy Council we shall deal with the whole matter.

THE ANTI-SYPHILITIC TREATMENT OF TABES DORSALIS AND GENERAL PARALYSIS.

IN a contribution published in the *Philadelphia Medical Journal* of April 18th, dealing with the most recent developments in the treatment of tabes dorsalis and general paralysis of the insane—two diseases hitherto regarded as hopelessly incurable—Professor Leredde of Paris brings together a number of important facts and illustrative cases and indicates briefly the direction in which further development may be expected in this branch of therapeutics. Professor Renaut of Lyons had recently shown that the pathological changes in tabes dorsalis and general paralysis may be syphilitic without necessarily conforming to the old classical description of syphilitic lesions. Nageotte's recent observations have shown that tabes is a chronic inflammatory affection of the spinal meninges affecting with peculiar intensity the posterior spinal nerve roots. The appearance of the lesion is quite consistent with the syphilitic origin of tabes and the cerebro-spinal fluid shows a moderate or marked degree of leucocytosis. By "recovery" in tabes dorsalis Professor Leredde means the arrest of the destructive process, comparable to the arrest of pulmonary tuberculosis. Fournier, in a recent work on para-syphilitic affections (1899), quotes a case of tabes with arrest of symptoms for 16 years after having undergone anti-syphilitic treatment. Recent observations by Lemoine of Lille on the "intensive" mercurial treatment of general paralysis and of tabes dorsalis, an account of which appeared in an annotation in THE LANCET of Sept. 6th, 1902, p. 690, and additional observations made subsequently by Leduc, comprise ten cases of tabes dorsalis subjected to the "intensive" mercurial treatment, with the result that considerable sensory and motor improvement took place in all and some few were cured. As regards general paralysis Professor Leredde, after collating a number of cases, carefully observed and recorded by various authors—*viz.*, six cases by Lemoine, nine by Devay of Lyons, and three by Cassaet, and adding to these other cases under his personal observation, making a total of 26 cases—says that these 26 cases may be considered as showing that good prospects of recovery may be entertained for general paralysis—a disease hitherto universally regarded as hopelessly incurable and fatal. The following two typical cases may be cited as illustrative of the results of treatment for general paralysis. Case 1 was that of a male general paralytic with weakness of the lower limbs, vertigo and ataxia, disturbance of speech and of handwriting, loss of memory, and a grandiose mood. He was treated with three-fourths of a grain of calomel injected weekly into the subcutaneous tissue. After some months his speech and handwriting improved, his memory returned rapidly, and the mental state regained its normal character. At the date of publication of this case (by Dr. Devay in 1902) complete recovery had been maintained for some time. Case 2 was that of a male general paralytic with tremors of the lips and hands, irregularity of the pupils, dulness of memory, dementia with confusion of mind, and loss of control over the sphincters. Mercurial inunction was tried and found to be followed by improvement which was rapid at first and slower afterwards. Gradually the mental state returned to the normal level and the patient was able to return to his business. During the next five years further improvement was noted, recovery being considered as complete at the end of that period by Dr. Cassäet, under whose care the patient had been during all that time. Professor Leredde draws the following important and weighty conclusions. First, anti-syphilitic treatment in patients with tabes dorsalis or general paralysis should begin early. "Delay is dangerous, because while we wait irremedial degenerations of the nervous system may be occurring." Secondly, for vigorous adults from one-half to three quarters of a grain of mercuric benzoate in normal salt solution should be given hypodermically as the full dose, the first few injections being half a grain, slowly rising to three-quarters of a grain. Symptoms of intolerance, such as indigestion, loss of flesh, and febrile reaction, would indicate over-dosage, in which case the dose should be lowered. Thirdly, the daily dosage should be increased only very slowly and the mouth and gums should be kept clean. In this way, adds Professor Leredde, dangers are minimised and therapeutic accidents are avoided.

THUNDERSTORMS AND TELEPHONES.

It is well known, of course, that electrical disturbances in the air interrupt the telephonic and telegraphic services and it has been stated that powerful discharges have occurred at the terminals of public electrical apparatus during the passage of lightning overhead. A violent thunderstorm passed over the metropolis last Saturday and it is stated that during the whole time this electrical storm was in progress very alarming electric discharges took place over the two large telephone switch boards at the Southwark headquarters of the Metropolitan Fire Brigade over which news of calls from all parts of London is transmitted. It was reported that no apparent damage was done to the apparatus and it so happened that there were no messages calling for attention during the time the discharges induced by the storm were taking place amongst the instruments. There can be little doubt, however, that had the telephones been used some discomfort would have been experienced, not to say real injury sustained, by the person who may have employed the instruments at the time. Both telegraphic and telephonic services may become a source of danger during great electrical stress in the air and persons should be warned against using the instruments at such a time and certainly when alarming symptoms of a storm manifest themselves in the way just described. The incident suggests unpleasant possibilities in the case of electric wiring in the house, for in this way atmospheric electricity may possibly be an occasional factor in the origin of an outbreak of fire.

HAIR-BALLS IN THE STOMACH.

In the stomachs of many of the lower animals hair-balls are liable to form, and they are especially common in cattle. The hair is licked from the surface of the body, is carried into the stomach and is there subjected to a churning movement by which it is moulded together into a compact mass. This is greatly facilitated by the tendency to "felt" which is possessed in a high degree by the hair of cattle, so that these hair-balls are firm round bodies and show on section a lamination corresponding to the successive deposits of hair. In the human being hair is but rarely swallowed, though sundry cases are on record in which the practice has existed. In many of the persons in whom hair-swallowing occurs there has been a history of insanity, yet it has been seen in those who had no other sign of mental derangement. A large majority of the patients are women. Human hair has but little tendency to "felt," because its surface is comparatively smooth and therefore we practically never find in the human stomach hair-balls resembling those found in the lower animals. Generally in human beings the hair forms a somewhat loose mass conforming more or less to the shape of the stomach. The quantity of hair present may be very great. Mr. George May published a case in the *Medical Association Journal* of Dec. 28th, 1855, in which the mass of hair weighed 26 ounces. Mr. J. Knowsley Thornton[1] has recorded a case where the weight of the foreign body was two pounds. Dr. Russell published in the *Medical Times and Gazette*, vol. i., 1869, p. 681, a case in which the mass of hair weighed four pounds seven ounces, but larger still was the amount of hair in a case under the care of Mr. Paul Swain[2] for it weighed five pounds three ounces. It is not surprising that masses like these form very obvious swellings in the abdomen and we publish in the present issue of THE LANCET an account by Dr. H. Mallins of a case where the abdominal swelling was large and at the necropsy it was found to be due to a mass of hair in the stomach weighing one pound nine ounces. In a few instances the presence of a foreign body has been diagnosed and the mass has been successfully removed by a gastrotomy. This was done in Mr. Thornton's case and in Mr. Swain's case mentioned above. Schönborn[3] has also published a successful case, and a fourth is recorded by Berg of Stockholm. Unfortunately in most cases the accumulation of hair has only been discovered at the post-mortem examination.

THE MOTOR-CAR PROBLEM.

Sir Ralph Payne Gallwey in a recent letter to the *Times* makes a suggestion which we can hardly expect to see carried out but which nevertheless deserves serious consideration He says:—

> As a sure means of identifying the reckless "don't care-a-hang for anybody" motor-car drivers, the class of men who daily imperil our lives and who are responsible for the "motor murders" that too frequently occur, I would suggest a legalised use of the shot-gun. In the case of a motorist—by wilful neglect of ordinary precautions—inflicting injury on a pedestrian, or causing damage to the property of a person driving or riding on the highway, followed by an attempt to escape detection by continuing his rapid progress, I consider the injured party should be legally permitted to fire at the offender. The gun not to be used at a range exceeding 40 yards and the shot with which it is loaded not to be of a larger size than No. 8 or 9.

Sir Ralph Payne Gallwey goes on to say that the motorist would only be shot in the back and that he could easily be identified by the shot holes in his clothes when these were removed by the police of the town receiving an intimation by telegraph to detain him. Probably the offending motorist would avoid the next town, but although the point raised by Mr. W. S. Gilbert in his letter to the *Times* of June 3rd as to the ultimate career of the car must be remembered the idea is distinctly good and might be applied with advantage to many other nuisances, as, for instance, "winner" yellers, piano organists or preferably piano organs, advertisement vans and the idiot upon them who blows a horn, German bands, and the like. As we write a huge traction engine is going along the Strand dragging three enormous trucks loaded with blocks of wood for wood-paving. This sort of traffic should not be allowed in London and the driver of the engine is not responsible, so we fear that in this case the shot-gun would not do, but some of these days an aggrieved ratepayer will call on the contractor or on the borough council who employ him armed with a similar weapon.

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[1] THE LANCET, Jan. 9th, 1886, p. 57.

[2] THE LANCET, June 22nd, 1895, p. 1581.

[3] Langenbeck's Archives, 1883, vol. xxix., p. 609.

The principle of the shot gun could be carried out just as effectually and without danger to life by casting a dose of indelible dye over the driver It would be a comparatively easy matter to supply the police with a rapidly acting dye squirt and the offender would certainly be marked and the marks unmistakeable If Sir Ralph Payne Gallwey's suggestion is worth anything at all it would be better and more humane to make the target not the driver but his air tyres That would effectually disable him, we fancy, without the drawback pointed out by Mr W S Gilbert Another method of pulling the motor car up in obedience to a signal would be to have a platform in the road provided with sharp points which could be made to present themselves when occasion demanded

THE PREVALENCE OF SMALL-POX

IN his report *for the four weeks ending* May 16th Mr F W Alexander, medical officer of health of the borough of Poplar, states that since his last report to the public health committee on April 24th nine more cases of small pox have occurred in the borough in connexion with a patient living in Ford road This patient was removed to the small pox hospital on April 20th and the other nine inmates of the house who had been exposed to the infection were taken to the council's shelter, Glaucus street Bromley, as mentioned in THE LANCET of May 16th, p 1392 They were vaccinated on April 21st, a date which was of course at least a fortnight too late for successful prophylaxis, and they were all removed from the shelter to the small pox hospital on various days from April 29th to May 18th. Four more cases have occurred since that time in a laundry in Poplar The recent history of the incidence of small pox in Poplar seems to show that there was an associated group in which one patient was the means of infecting 19 others The Local Government Board of Scotland intimates that during the period from May 16th to 31st inclusive six cases of small pox have been reported to it from the burgh of Dundee, one from *the burgh of Glasgow,* and *one from the burgh of Coupar* Angus

ACUTE GRAVES'S DISEASE WITH MANIA

IN the *Quarterly Medical Journal for Yorkshire and Adjoining Counties* for May Dr F R B Atkinson has described a remarkable case of acute Graves's disease with the rare complication of mania A man, aged 55 years, was seen on July 18th, 1902 He had felt ill for a month and he complained of languor, hoarseness, loss of flesh and palpitation He received a severe shock about 12 months before in consequence of loss of money and had never been himself since He was nervous and irritable and his speech was very rapid The thyroid gland, especially the right lobe, was much enlarged and pulsation of the carotids was visible There was no proptosis but his wife said that his eyes stood out at times There was marked pulsation over the whole cardiac area and in the epigastrium The heart was enlarged and there was a systolic thrill but no murmurs were heard The pulse was 108 small, and intermittent *Grafe's,* Stellwag's, and *Möbius's signs* were absent The patient rapidly became worse and on August 23rd diarrhœa and vomiting with tremors of the arms and legs, and sometimes of the jaw, set in Speech became much faster and at times was unintelligible On the 29th he cried and at night became maniacal, talking nonsense and shouting He could only be kept in bed with difficulty The right pupil was dilated The pulse was 130 and on the patient rising in the bed it became 140 Stellwag's sign was present On Sept 1st the *tache cérébrale* could be obtained and there was marked delirium On the 3rd the temperature was 101° F and there were dysphagia and râles at the bases of the lungs He was evidently dying On the 4th he was unconscious and his legs moved up and down continuously in a choreiform manner The goitre was much smaller and the pupils were equal Death occurred at noon Dr Atkinson thinks that the dilatation of the right pupil was probably due to irritation from pressure of the right lobe of the thyroid Its disappearance before death is explained by the diminution of the thyroid Mental disturbance in Graves's disease usually takes the form of melancholia Dr Atkinson has collected 25 cases in which mania occurred Of these 17 were fatal The disease in the present case was remarkably acute, its total duration appears to have been only two and a half months

"THE DIRTY FOUNTAINS IN TRAFALGAR-SQUARE"

WE *are glad to find that our remarks last week upon the* dirty condition of the water of the fountains in Trafalgar-square have raised considerable public comment on this matter We learn that the water which supplies the fountains is, as a matter of fact identical as regards its source with the water supplied to Buckingham Palace, Marlborough House, the Houses of Parliament and the Government offices The source is an artesian well and the water is pumped into tanks in Orange street, which are connected by a horizontal tunnel 400 feet in length which forms a reservoir with a capacity of 112 000 gallons. It would be interesting to determine the composition of the water supplied to the Royal residences and the Government offices in order to discover any essential differences which exist in relation to organic purity between the water of the fountain and this drinking supply Should analysis show—and we should not be surprised—a condition similar to that of the water derived *from Aldgate* pump *a few years ago* this source of supply would have to be discontinued We understand, however, that for the sake of economy the water pumped to the fountains is used over and over again If that is the case instead of being things of beauty and purity the fountains are circulating and disseminating filth in the manner indicated by the analysis which we published last week. Apart from fountains Trafalgar square is a disgrace This "finest site in Europe is little better than a refuse catchment area patronised chiefly by ragged urchins and dirty people We are glad to see the suggestion that the asphalte area should be converted into "a glowing parterre of colour" by removing the asphalte altogether and replacing it with grass and flowers

QUACKS IN GERMANY

IN the *Standard* of June 1st appears the following message *from* the *special correspondent of that journal* at Berlin dated May 31st —

> The Imperial Home Office has addressed a circular to the Federal Governments on the subject of quack medicines and doctors It proposes that stringent measures shall be taken against what is described as a growing evil which it is said has assumed proportions in Germany which are decidedly dangerous to the public welfare Amongst the measures proposed is one for the compilation of a register in which all the names of all quack doctors have to be entered It is also proposed that obvious exaggerations in newspaper advertisements by quacks shall be prohibited The police it is suggested should be authorised to prevent quacks *from exercising their calling whenever there is reason to believe that a continuation of their practice would* be injurious

We wonder when our Imperial Government will take a similar step A press censorship does not exist in these islands and to the credit of British journalism such a censorship as regards the body of a journal is not needed But when we look at the advertisement columns the case is different Journals of the highest standing insert page advertisements of such well known quackery as the Drouet Institute, while the advertisement columns of the popular monthly magazines are crammed with notifications of all sorts of quack remedies including those emanating from the scoundrels who trade on the fears of sexual hypochondriacs. The flagrant advertisements from abortionists seem to have received a check owing, we think we may say, in great part at least, to the articles which appeared in our own columns on the matter, but "Dr." Bell and others of his kidney still advertise their deceptions in newspapers and magazines and distribute lures for dupes broadcast with the connivance of His Majesty's Postmaster-General. Such things should not be and the sooner that our Government takes up the matter the better.

THE WORTHLESSNESS OF ABSENCE OF LIVER DULNESS AS A SIGN OF PERFORATION OF THE STOMACH OR INTESTINE.

IN THE LANCET of April 18th, p. 719, we published an annotation in which we drew attention to the uselessness of the absence of liver dulness as a sign of free gas in the peritoneum, though many still attach some value to this physical sign. Dr. Charles Viannay of Lyons has brought to our notice a paper which he read when he exhibited a specimen of very great interest at the Société des Sciences Médicales de Lyon on Dec. 17th, 1902, and which was published in the *Lyon Médical* of Feb. 8th, 1903. Dr. Viannay is prosector to the Faculty of Medicine of Lyons and in the dissecting room he found a liver which showed on the upper surface of its left lobe a well-marked impression due to the transverse colon, a loop of which had insinuated itself between the upper surface of the liver and the diaphragm. The body was that of a woman, about 40 years of age, who had died from an extensive cellulitis of the neck The liver weighed 1320 grammes (42½ ounces) and bore evident traces of constriction from the corset, for the upper surface of the right lobe showed four long and deep costal impressions. The gall-bladder was hidden under the ribs near the hepatic flexure of the colon, to which it was attached by old adhesions. The right half of the transverse colon was adherent to the anterior edge of the liver, under which it was lying as far as the falciform ligament. Immediately to the left of this ligament the colon turned round the anterior border of the liver and formed a large loop which passed later over the front of the stomach to the splenic flexure. This condition is rare, but Dr. Viannay has discovered other instances of it. Mauclair and Mouchet[1] described a case where the transverse colon formed a loop between the right lobe of the liver and the diaphragm, passing as far back as the coronary ligament. Cohan[2] saw four cases in which a similar condition obtained. Other instances have also been recorded It is obvious that such an interposition of bowel between the liver and the abdominal wall would cause absence of more or less of the liver dulness according to the amount of bowel involved, and therefore absence of the hepatic dulness can have no value as an indication of perforation. In the discussion which followed the reading of the paper which we have mentioned Dr. Mouisset remarked that the liver dulness may be absent for several reasons and Dr. Jaboulay said that he had seen the liver dulness absent in cases of gaseous cysts of the intestine.

THE Harveian Lectures of the Harveian Society of London will be delivered by Dr. D. B. Lees on Nov. 5th, 12th, and 19th of this year at the Stafford Rooms, Tichborne-street, Edgware-road. The subject of the lectures will be the Treatment of some Acute Visceral Inflammations.

WE regret to announce the death of Mr. Alfred Haviland, M R C.S. Eng. Mr. Haviland, who passed away on June 1st at the age of 78 years, will be remembered as having done much excellent work on the subjects of medical geography and climatology as concerned with the distribution of disease.

THE annual dinner of the Indian Medical Service will b held at the Café Monico. Piccadilly-circus, on Thursday June 11th, at 7.45 P.M., when the chair will be occupied b Surgeon-General Sir Annesley De Renzy, K.C.B. Officer intending to be present should communicate at once wit the honorary secretary, Mr. P. J. Freyer, 46, Harley-stree W.

Dr. J. J. R. Macleod assistant demonstrator of physiolog at the London Hospital, has been appointed Professor Physiology at the Western Reserve University, Clevelan Ohio, which celebrated its sixtieth anniversary this yea Dr. Macleod graduated in 1898 with honours at the Universit of Aberdeen.

Dr. W. Collingridge, medical officer of health of t City of London, will preside at the eleventh ann meeting of the Church Sanitary Association at the Chur House, Westminster, S.W., on Wednesday, June 24th.

THE annual dinner of the Royal Army Medical Cor Militia will be held on June 8th at the Trocadéro Restauran Piccadilly Circus, London, W., at 8 P.M. Medals and orde will be worn.

THE CORONERS' SOCIETY OF ENGLAN AND WALES.

ANNUAL MEETING.

THE annual meeting of the Coroners' Society of Englar and Wales was held in the Holborn Restaurant on May 28t Mr. H. J. ROBINSON (Blackburn and Burnley), the retirin President, was in the chair and about 50 gentlemen we present.

The minutes of the last annual meeting having be adopted the election of officers for the forthcoming sessi was proceeded with. Mr. J. BRADLEY (Birminghar proposed Mr. Henry White (Hants and Winchester), t senior vice-president, for election to the office of presider remarking that the gentleman was a very old member their council and most diligent in his attendance. M SPENCER CLARKE (Hants) seconded the motion which w carried unanimously.

Mr. WHITE then took the chair and in thanking t proposer and seconder said that the experience of the latt as a coroner went back for 40 years, while he himself (M White) had now been a coroner for nearly 30 years.

A vote of thanks to Mr. Robinson, the retiring pr sident, was proposed by the new PRESIDENT, seconded Mr. G. E. ROUMIEU (Surrey), and carried unanimously. On the motion of Mr. ROBINSON, seconded by Mr CHRISTOPHERS (Warwickshire), Mr. S. F. Butcher (Bur was re-elected as a vice-president and Mr. G. Percev Wyatt (London and Surrey) was chosen to succeed M White as a vice-president.

The PRESIDENT, in proposing the re-election of M Walter Schröder (deputy coroner for London Centr District) as honorary secretary, said that everyone kne something of the work which Mr. Schröder had done in th capacity. It was to all of them a source of extreme gratific tion when Mr. Schröder expressed his willingness once mo to undertake the duties of the office.

Mr. BUTCHER indorsed all that had been said by t President in Mr. Schröder's praise and at the same tir seconded the motion which was carried unanimously.

Mr. SCHRODER, after thanking the meeting for his electio remarked that the report which he had prepared was som what lengthy on account of the number of subjects whi had to be dealt with. By way of appendix to the report h had been able, through the courtesy of Messrs. Benholm the proprietors of a local newspaper at Colchester, reproduce an illustration of treasure-trove found in th ancient city. The report contained another illustratio reproduced from the *Sphere* by the courtesy of the Nineteen Hundred Publishing Syndicate, Limited, who lent the engraved block, and by permission of the family of the late Mr. Wakley. This was a copy of an old print of an inquest held by Mr. Thomas Wakley, M.P., by whose side, on the left, stood Charles Dickens. Mr. Schröder was of opinion that the inquest there depicted was held in central London, probably in St. Pancras, and that the sketch was by George Cruikshank, whom he knew. On several occasions that artist attended inquests held by the late Dr. Lankester and Dr. Hardwicke and it was quite possible that he was present at some held by Mr. Wakley.

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[1] Bulletin de la Société Anatomique, 1896, p. 600.

[2] Recherches sur la Situation du Colon Transverse. Thèses, Paris, 1897-1898, tome 11.

Mr. Perceval Wyatt was then re-elected honorary treasurer and some vacancies on the council were filled.

Mr. SCHRODER, the honorary secretary, moved the following addendum to Rule 1 of the society :—

> And that coroners and deputy coroners outside England and Wales be admissible as extraordinary or corresponding members.

The need of this addition to their rules was, he said, to enable coroners in other parts of the empire and elsewhere to join the society as corresponding members; any coroner in Ireland, for instance, who might wish to join them could do so in this way. The motion was seconded by the coroner of Rochester and carried unanimously.

The meeting then proceeded to consider the council's report.

On the motion of Dr. AMBROSE, seconded by Mr. J. BELL, the subjoined motion was carried :—

> That this annual meeting of the Coroners' Society desires to call attention to the present unsatisfactory state of the law dealing with the provision of places for the holding of inquests and the performing of post mortem examinations and requests the council to approach the Home Secretary on the matter.

The meeting closed with votes of thanks to the honorary secretary and the honorary treasurer for their services during the past year.

ANNUAL BANQUET.

The annual banquet of the society took place on the same evening. The President was in the chair and a large number of coroners and guests were present.

After the loyal toasts had been duly honoured Mr. BUTCHER gave "The Houses of Parliament," the toast being acknowledged for the House of Lords by Lord MONKSWELL, chairman of the London County Council, in a humorous speech. Mr. LUKE WHITE, who responded for the House of Commons and is himself a coroner, dwelt upon the part played by coroners in the securing of domestic legislation and in promoting the interests of the poorer classes.

"The Imperial Forces" was proposed by Mr. I BRADLEY, coroner for Birmingham, who remarked upon the voluntary character of the services rendered by the Imperial forces and paid a special tribute to the work and character of the police. This toast was responded to by Major READ

Mr. MACMORRAN, K.C., in proposing "The Coroners' Society," observed that the society was established in 1846 to protect and to further the interests of coroners. But since then its scope had been very much enlarged and not only had it been the means of helping to raise the status of the coroner largely in public esteem but it had done good work in the interests of the people and was now a real power in this kingdom, its advice being often sought and the voice of the society having weight in influencing legislation in many ways. He also remarked that, at all events in London, inquests were rarely held as of old in public-houses, but that coroners' courts, mortuaries, and post-mortem rooms had been provided by the county council and local authorities which had long been suggested and urged by the society. He gave "The Coroners' Society, long may it prosper."

The PRESIDENT, in replying, said that in no other case did more depend upon the man and less upon the office than in that of a coroner; for a coroner had to exercise much tact and to show great judgment in discharge of the various difficult duties which fell to his lot. He referred to their relations with the poorer classes of His Majesty's subjects, to the services that coroners were able to render in assisting in bringing about legislation of benefit to them, and to the many cases of sorrow and sadness which came before them and in some of which they were able to give balm and comfort in times of deep distress. In concluding he remarked that he thought that inquests held in public-houses would soon be a thing of the past.

The health of the retiring President, Mr. Robinson, was then proposed and suitably acknowledged.

The toast of "Our Guests" was given from the chair in cordial terms and briefly responded to by Sir A. de RUTZEN.

"The Officers of the Society" coupled with the name of the honorary secretary, was the last toast, in proposing which the PRESIDENT referred to the pleasure it gave the members that Mr. Perceval Wyatt should retain the treasurership in addition to the vice-presidency to which he had that day been elected. The services which Mr. Schröder had rendered to the society were much appreciated, and it was a matter of great gratification to him personally and to the members generally that Mr. Schröder had consented to continue as their secretary.

Mr. SCHRÖDER, in replying, said that it was with some diffidence that last year he took office, as he had little spare time at his disposal, and especially as he had not the advantage of being either a medical or a legal man, to say nothing of the combination of both law and physic possessed by many coroners in the present day. However, favouring circumstances of many years of coroner's work had enabled him to gain a somewhat extensive experience of the law and practice of the coroner's court which had served him in good stead and he was glad to find had proved useful to others. He had long recognised that reforms in the coroner's court might be made with beneficial effect to meet the changing condition of the times and to insure greater uniformity in practice and with advantage to the public interests His desire was to help forward any such movement and in using his endeavours to that end he felt sure that he would thereby assist in maintaining the dignity and honour of the office of coroner. He would always be pleased to do all he could for the benefit of the society.

The pleasure of the evening was enhanced by some excellent vocal music.

ARMY MEDICAL DEPARTMENT REPORT FOR 1901.

THE Army Medical Report for 1901 has just been issued. In addition to the usual statistical returns and statements regarding the health and sanitary condition of the troops serving at the various stations and commands at home and abroad it contains a report on the Progress of Hygiene for the year 1901–02, by Major R. H. Firth, R.A.M.C., professor of military hygiene in the Medical Staff College, London; a list of Operations with Notes on the more [illegible] and Remarks on the Work in the [illegible] Royal Victoria Hospital, Netley, [illegible] Colonel W. F. Stevenson, C.B., R.A.M.C., the professor, and Lieutenant-Colonel W. Dick, R.A.M.C., assistant professor, of military surgery at the Army Medical School; and a Report on the Medical History of the China Campaign of 1900–01.

To begin with the excellent prefatory summary statement as to the health of the troops at home and abroad we may usefully refer to some of the more salient points presented.

The average strength of the European troops, exclusive of those in South Africa, in 1901 was 196,796 warrant officers, non-commissioned officers, and men. The total number of admissions to hospital was 172,908 and the total deaths were 1762. The admissions represent a ratio of 878 6 per 1000 of strength; the deaths one of 7·70 per 1000 on a strength of 228,816, which includes detached men not shown in the returns received.

As regards the troops serving in the United Kingdom there is nothing which strikes us as calling for special remark. The admission and constantly sick rates were higher and the mortality rate was lower than in 1900. There were 157 admissions to hospitals and 39 deaths from enteric fever. An outbreak of that fever at Portland was supposed to be due to the mingling of returned South African convalescents with young soldiers in their barrack rooms, conditions which it need scarcely be said were soon remedied.

At Gibraltar the health of the troops was favourable as compared with 1900. There were less enteric fever and a marked decline in the admission rate for venereal disease In the Malta command, which included Crete, the admission, mortality, and constantly sick rates were slightly higher than in the previous year. Ague was very prevalent in Crete in 1901—indeed, the disease was epidemic there during the latter portion of that year. It is pertinently remarked that in the native town of Kandia, which is close to the camp, mosquitoes of the anopheles and culex species abound and there is also a large marsh not many miles off. The health of the troops in Canada was good on the whole. In Bermuda the decline in enteric fever previously reported was maintained in 1901. We notice that five admissions and four deaths from yellow fever at St. Lucia are recorded, attributable, it is alleged, to the probable importation of the disease into the colony by shipping from South America. As regards South Africa it has to be borne in mind that no annual returns of sick have been submitted and that consequently no statistics for comparative purposes can for the present be prepared. The health of the troops in Mauritius was on the whole good. There was an increase in the prevalence of malarial fevers as compared with 1900. The troops had escaped plague which was prevalent throughout the island. In Ceylon it is mentioned that there were a large number of cases of enteric fever among the Boer prisoners of war at Diyatalawa camp and that three cases of enteric fever occurred among the men of the military guard at that camp. The health of the troops in the Straits Settlements is stated to have been most satisfactory. Two admissions from plague, both of the cases being fatal, occurred among the troops serving in China, where the disease, it will be remembered, was epidemic among the civil population in 1901.

In India there was a decrease in the admission, mortality, and constantly sick rates, but an increase in that of invaliding. The chief causes of sickness, as usual, were malarial fevers and venereal diseases, which together caused 52 11 per cent. of the admissions for all diseases. As regards enteric fever, it is noted that not since 1887 has there been a lower admission rate, while the death-rate is less than in any year since 1884. The cessation of the usual reliefs and the retention of time-expired men in the country are cited as agents in bringing about the reduction, but credit would also appear to be due to the greater care taken with regard to soldiers' food, drink, and sanitary surroundings, and to the absence of field service, although it still remains to be seen what effect the arrival of large drafts of young soldiers will have on the prevalence of the disease. During the year only 12 fatal cases of cholera occurred and there were also two admissions for plague, one case resulting fatally.

In Egypt the admission, death, and constantly sick ratios were higher than in 1900. Influenza caused 361 admissions, all the cases occurring at Cairo, where the disease assumed an epidemic form in July, August, and September. The ratio of admission for enteric fever was practically the same as in the previous year.

THE MEDICAL DEFENCE UNION.

ANNUAL GENERAL MEETING.

THE annual general meeting of the Medical Defence Union was held on May 21st at 4, Trafalgar-square, London, Mr. M. A. MESSITER, the PRESIDENT, being in the chair.

The report of the council, to which we refer more fully below, contained a satisfactory account of the successful progress of the union.

The PRESIDENT, in moving the adoption of the report of the council, said that the union was full of vigour and reviewed the work carried through in 1902, describing it as excessive, varied, and important. Questions dealing with unqualified practice, medical aid societies, advertising, covering, libel, slander, malpraxis, boards of guardians, hospital boards, and infectious diseases had been fought out on the principle of never compromising in any case and in every one the union had been successful.

Dr. W. S. A. GRIFFITH seconded the motion and said that in his opinion if the entrance fee was made one guinea instead of 10*s*. the council would be doing a right and proper thing.

After some discussion the report was adopted unanimously.

The adoption of the accounts for 1902 was proposed by Dr. HEDLEY HILL, seconded by Dr. J. T. MACNAMARA, and carried unanimously.

On the motion of Dr. H. CAMPBELL POPE, seconded by Dr. W. RIGDEN, provision was made for the payment of railway fares to the members of the council attending meetings from the provinces.

The meeting terminated with a vote of thanks to the executive after the re-election of the following members of council: Dr. M. Beverley, Mr. T. Garrett Horder, and Dr. W. Rigden.

ANNUAL REPORT.

We have received a copy of the annual report and statement of accounts for the year 1902 of the Medical Defence Union. The objects of the union are too well known to need detailed repetition here and the council and members may be congratulated on the continued and satisfactory progress of the society. During the past year 896 new members were elected, a number which in itself is sufficient proof that the efforts exerted by the managing council have received due approbation at the hands of the profession in general; for not only does the society concern itself with the affairs of its members but also undertakes the prosecution of unqualified persons when such cases are brought under its notice and also conducts cases before the General Medical Council when alleged grave unprofessional conduct is imputed. The services thus rendered to the whole of the medical profession are very great and deserve the recognition which has been accorded during the past year in the shape of the greatly increased entry of new members. In the report before us several cases are recorded in which the union has been of public service. Especially noteworthy is the prosecution of a man who passed under the names of Dr. Hoffmeister, Dr. Dobie, and Dr. Elliott, and who was charged with manslaughter and perjury. It was entirely due to the efforts of the union that he was finally traced, arrested, and sentenced to five years' penal servitude. During the trial a very important ruling was propounded by Mr Justice Bigham. He pointed out to the jury that the prisoner went under three false names, all of which were upon the Medical Register, but none of these was his own name. This fact was not in itself evidence of negligence, but if a man like the prisoner did hold himself out to have medical skill he gave it as his opinion that the act constituted in itself gross negligence and directed the jury to take this as his ruling on that point.

Another striking point in the report is the varied nature of the claims for advice and assistance which are dealt with by the general secretary (Dr. A. G. Bateman). Information was sought on the Acts of Parliament dealing with lunacy, inquests, the Poor-law, vaccination, public health, employers' liability, notification of disease, vivisection, the law of partnership, coroners, and other points requiring legal assistance. When advice of this nature is sought the matter is promptly dealt with, Dr. Bateman or the solicitor to the union, Mr. W. E. Hempson, at once taking action if the case is so urgent as not to be capable of postponement until the next meeting of the council or of the executive committee.

The influence of the union is making itself very generally felt, not only amongst its own members for their own benefit but also in other ways, as explained by Mr. Hempson in his report. The chief items of expenditure were incurred in cases in which, although the union has proved successful, it has been unable to recover any portion of the costs owing to the pecuniary position of the litigant. The man who has nothing to lose has everything to gain and if he can find a solicitor who is prepared to conduct a case on the chance of securing either a favourable compromise or a verdict in his client's favour then the litigant is well content. But solicitors of this class are now extremely wary of carrying an action to any great length when they find that the medical man concerned is a member of a society for medical defence. In many cases it is quite sufficient for the secretary of the society to write and to inform those solicitors that the case has been placed in the hands of the society for the action to be at once abandoned.

At the present time the membership of the union is approximately 6000. An enormous number of cases were dealt with during the year, as a glance at the schedule of cases selected from the minute-book will show. 155 cases were referred to the solicitor, all of which necessitated either legal action being taken on behalf of the members concerned or legal advice and assistance being accorded to them. One important change in the management of the union during the past year was effected by an entrance fee of 10*s*. being imposed upon all new members. Although the funds of the union are in a perfectly stable condition yet the number of cases which require aid and advice has increased rather than diminished and the necessary cost of taking action before the legal tribunals makes a heavy inroad into such funds. It is true that, owing to careful management, the union has had for many years (and has at the present time) a balance in hand at the termination of each financial year, but at the same time it was felt very strongly that this margin of income over expenditure was not sufficient to relieve the council from some measure of anxiety at the close of each year when heavy legal costs have to be met. After prolonged and careful consideration, therefore, the council decided to adopt the imposition of an entrance fee. We have no doubt that the decision was a right and just one. Increase of membership means increase of responsibility and the sum of 10*s.* will, we feel assured, have no deterrent effect in preventing the entrance of new members. Medical men, no matter which branch of the profession they take up, are constantly liable to be attacked by impecunious and malicious individuals for the purpose of levying blackmail. It is therefore of the greatest comfort to a practitioner to feel that he has support behind him upon which he can rely to assist him with the best legal advice without the ruinous costs which may ensue if he has to meet the charge entirely on his own behalf. We heartily wish the union and other similar societies continued success.

MEDICINE AND THE LAW.

A Case under the Dentists Act.

AN unqualified person practising dentistry was recently summoned under the Dentists Act (41 & 42 Vict. C. 33, Sec. 3) for unlawfully taking and using an addition or description, "R.D.S. Eng., Surgeon Dentist," implying that he was registered under the Dentists Act, 1878. The magistrate dismissed the summons and the Divisional Court has now upheld his decision on the ground that it was one of fact and consequently not one with which the court could interfere, its duty being to hear appeals upon questions of law only. The facts alleged are peculiar and the result may be somewhat serious if unqualified practitioners of all kinds take to following the example set them in this case, unless it can be shown that in such circumstances some other offence than that of taking a title implying qualification is committed. The defendant in the case under consideration bought the practice of a properly qualified dentist who had died, took over the premises in which the deceased had practised, and put up on the front railings his own name upon a marble slab, thus: "Mr. W. Lawson Whitlock, 10-5." He also left up the name of his qualified predecessor in all the places in which that gentleman had put it, with the result that "Mr. R. O. Stent, R.D.S. Eng., Surgeon Dentist," appeared in two places on or about the house and in another "Messrs. Stent, Surgeon Dentists. Est. 1840. Hours of attendance 10 to 6 or by appointment." To a patient he appears to have said in answer to a question as to whether he was Mr. Stent, "Mr. Stent is dead: I am Mr. Whitlock." These were the facts alleged as evidence that the defendant had "taken and used" titles implying that he was possessed of qualifications to practise dentistry. It is clear that a natural result of what was done would be to cause persons going to the house to think that the person operating on them was qualified, but that was not the offence charged. Upon the question of the taking and using the Lord Chief Justice intimated that he himself might have come to a different conclusion from that of the magistrate had he occupied his place, but that did not entitle him to say that there must be a conviction. [illegible]

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the case commented on was not one of the ordinary instances of taking and using a description implying qualification; it was probably not a case contemplated by those who framed the Act and consequently the language used was not sufficient to meet it. At all events if any unqualified person adopts the same course as Mr. Whitlock in the future he will do so with impunity, unless either the magistrate before whom he is brought takes a different view from that of the gentleman before whom Mr. Whitlock appeared or a different charge, based possibly upon the inducing patients to believe him to be qualified, can be sustained. If no penalty can be enforced for such conduct the prospect is somewhat serious. The practice of a deceased qualified medical practitioner or dentist may be worth very little to the executors, but the right, if right it can be called, to put his own name-plate under one which records recognised qualifications may be worth a great deal to a quack. Moreover, it is not absolutely clear that the right need be acquired in the sense in which Mr. Whitlock acquired it or that there need be any show of right at all. If Mr. Whitlock had put up a wholly fictitious name with wholly fictitious qualifications he would not apparently have been held by the magistrate to have been taking and using an addition or description within the Act, for the magistrate evidently thought that the addition or description must be appended to the name of the user of it in order to constitute the offence. A person so using a fictitious name might be convicted if charged with obtaining money by falsely pretending that he was a qualified person, but prosecutions of this kind are not always easy to bring to a successful conclusion and it is a matter to be regretted by the public and by the medical profession that the Medical Acts should not afford them the certainty of protection upon such occasions.

The Registration of Children

The lady, named Bedford, who was convicted and fined £10 by Sir Albert de Rutzen for giving false information to a registrar of births concerning the birth of a child, was perhaps fortunate in that prompt discovery followed her action. Apparently she was desirous of adopting a child. What the motive may have been we need not inquire or discuss, but she obtained a female child from a young single woman who had recently been delivered, and not content with taking the infant and treating her as her own she caused her to be registered as having been born at an address in Upper Woburn-place, and gave her own name and that of her husband as the names of the parents. In Mrs. Bedford's case the unexpected appearance of a child apparently provoked immediate surprise and comment. In some families where the members are scattered and live without communicating with one another, such deceit practised upon a registrar might easily pave the way to serious confusion and error in the future. Apart, however, from the possible perpetration of fraud, the registers of births, marriages, and deaths play so important a part in the organisation of the protection of the public health and safety and are so difficult to maintain with the desired accuracy that any attempt deliberately to falsify them deserves very severe punishment indeed.

An Undesirable Midwife.

At Dewsbury a midwife who failed to put in an appearance at an adjourned inquest was recently ordered by the coroner to be arrested and imprisoned for 24 hours. At the opening of the inquest on a previous day she had arrived under the influence of drink and had been severely censured by the coroner. A medical man who had made a post-mortem examination of the infant's body which formed the subject of the inquiry stated that death was due to insufficient inflation of the lungs and the jury found a verdict of "Death from natural causes aggravated by want of attention at birth." The medical witness stated with regard to the midwife that it was six years since he had attended a confinement at which she had been engaged and that he had then warned her not to go near any case with which he might be connected on account of her filthy and drunken habits. She had been fined for being present at a confinement after attending an infectious case. The Midwives Act will, doubtless, in time provide protection for the poor against such persons as this. The name of "Mrs. Hardy" is not likely to appear upon the roll of midwives as having practised as a midwife and borne a good character so as to enable her to be registered before April, 1905.

THE CENTRAL MIDWIVES BOARD.

A MEETING of the Central Midwives Board was held on May 28th at the Privy Council Office, Whitehall, when the following business was transacted: 1. A letter was read from the secretary of the Liverpool Ladies' Charity and Lying-in Hospital praying for the recognition of its certificate in midwifery as a sufficient qualification under

Section 2 of the Midwives Act, 1902. The secretary was instructed to reply that the application would have the careful consideration of the Board when it came to deal with the question of the acceptance of "other" certificates under Section 2. 2. A draft form of notice of the effect of the Act for the use of local supervising authorities was considered, amended, and approved. 3. The secretary reported as to negotiations for acquiring suitable offices for the Board and further instructions were given to the sub-committee in charge of the matter. 4. The secretary was instructed to prepare for the consideration of the Board at its next meeting draft forms of (*a*) Midwives Roll and (*b*) certificate under the Act.

THE MEDICAL, SURGICAL, AND HYGIENIC EXHIBITION.

THIS annual exhibition was opened at Queen's Hall, Langham-place, on June 2nd and the continued interest shown alike by exhibitors and visitors in the proceedings affords evidence of the success of the scheme which was instituted seven years ago. Undoubtedly members of the medical profession find a visit, however short, to this exhibition instructive, judging from the numbers known to attend and the organisers may be congratulated on the practical encouragement that they have received in past years. The movement which they initiated has now become a regular institution which is appreciated by medical men, pharmacists, public health officers, and others.

It can hardly be expected that each year the exhibition can be exclusively devoted to absolute novelties, nevertheless a number of novelties will as a rule be found to attract the attention of the visitor. This year special foods and food products undoubtedly predominated over drugs and surgical appliances, although sanitary appliances seem to occupy a larger share of the space than on former occasions. By far the majority of the food preparations shown have already received attention in THE LANCET Laboratory, the results of their analysis having been presented to our readers from time to time. We may mention, for instance, the food preparations of the Shredded Wheat Co. (6 and 8, Eastcheap, London, E C.), including the shredded whole wheat biscuit which contains the entire constituents of wheat and the solubility of which has been increased by the special process adopted during its manufacture. A recent introduction of this company is the "triscuit" which is a wafer formed of shredded wheat containing the constituents of the wheat intact in a palatable form and shape. Quite recently we recorded the results of analysis of some of the Telma foods (Telma, Limited, 57, Fenchurch-street, London E.C.), which consist generally of malted cereals of an easily digestible character and also of high nutritive value. One of the first preparations to contain the casein of milk was "protene," upon which we reported some years ago. This product is added to bread, biscuits, chocolate, and cocoa, with obvious dietetic advantage. We have also recorded our laboratory experience of the dietetic value of peptenzyme (Carnrick) of the Peptenzyme Company (80, Gloucester-road, South Kensington, London, S.W.). We were able to confirm the activity of this preparation by which it is able materially to help the processes of nutrition. The maltine preparations of the Maltine Manufacturing Co. (25, Hart-street, Bloomsbury, London), are also well known and it is evident that these preparations maintain their standard position amongst food adjuncts. We expressed our opinion a short time ago on the preparation then called primox but now known as vegox, supplied by Primox, Limited (53, New Broad-street, London, E.C.), which is made from both meat and vegetables. The preparation is decidedly more palatable than simple meat extract, while its nutritive value is certainly not less. Karnoid, Limited (6 and 7, Stonecutter-street, Ludgate-circus, London, E C.) exhibited the recently improved form of karnoid. It is a fact of no small importance and much in favour of this preparation that it is prepared without resource to chemicals or preservatives and yet contains the nourishing constituents of meat unaltered, amongst which, of course, is the myosin albumin. Messrs. G. van Abbot and Sons (Baden-place, Crosby-row, Borough, London, S.E.) showed a useful assortment of foods suitable for the use of diabetic patients, dyspeptics, and invalids. Maggi's consommé, tonic bouillon, soups, and essences are well known not only for their excellent flavour but also for their nutritive value, as shown by some analyses which we have made. These preparations were exhibited by Messrs. Cosenza and Co. (95, Wigmore-street, Cavendish-square, London, W.). A novel preparation is "maltova" (Maltova, Limited, Leeds and London), a combination of active malt extract with raw eggs. The genuineness of the preparation, as we have already pointed out, is shown by (1) that it readily converts starch emulsion into soluble starch and finally maltose; (2) that it turns nearly solid on heating, this being due to the coagulation of egg albumin; and (3) that it contains phosphorus and sulphur in organic association. A similar preparation, in which the egg is first dried by a special method and its nutritive constituents thus concentrated, is the condensed egg syrup of the Condensed Egg Syndicate (85, Tooley-street, London, S.E.). Preparations are made containing either the yelk or white of egg or both. Again, dried eggs themselves without any addition are prepared and there is also a combination of the nutritive elements of fresh eggs with active malt extract which is known as "ovo-malt." Messrs. Callard and Co. (65, Regent-street, London, W.) exhibited several new foods adapted for patients suffering from diabetes or obesity. In addition to special breads and biscuits they prepare also sugarless marmalade, chocolate, and jellies. The patent groats and barley of Messrs Keen, Robinson, and Co. (Garlick-hill, London, E.C.) have been before the medical profession for a great number of years as a well-known source of food for infants and invalids when used in the form of barley-water. The British Somatose Co. (165, Queen Victoria-street, London, E C.) exhibited their somatose preparations, the basis of which is albumose. Clinical trial has shown somatose to be a true meat nutrient. A great assortment of meat preparations were exhibited by the Liebig's Extract of Meat Co., Limited (4, Lloyd's-avenue, London, E.C.), and a similar series of preparations was shown by Bovril, Limited (152 to 166, Old-street, City-road, London, E.C.). Malted foods were well represented in the exhibit of the Hovis Bread Flour Co. (Macclesfield), a feature of the exhibit being the Hovis food for infants and invalids, upon which we have analytically reported in our columns. Quite recently also we have referred to Moseley's food (Moseley's, Limited, Stockport) which is essentially a cereal food rendered more soluble and digestible by a special method of treatment. Cerebos salt (Cerebos, Limited, Newcastle-on-Tyne) marks a distinct advance on the old table salt; it is beautifully fine and white and, owing to the addition of phosphates, does not cake or become wet Plasmon is now universally known to the profession and is recognised as a powerful food which is rapidly assimilated and therefore of particular value in wasting diseases. Specimens were shown of the pure proteid and of its combination with beef, cocoa, and arrowroot by International Plasmon, Limited (56, Duke-street, Grosvenor-square, London, W.). To many persons "Hipi" recommends itself, being an extract of mutton of decidedly nutritive value, while it is palatable to the taste. Lozenges containing mutton extract, suitable for use when ordinary food cannot be obtained, were also a feature of this exhibit (G. Nelson, Dale, and Co., 14, Dowgate-hill, London, E.C).

As we have already stated, the display of drugs was on a decidedly smaller scale than in previous years, although there were some new preparations well worth bringing to the notice of the medical profession. Amongst these should be mentioned "antiphlogistine" of the Denver Chemical Manufacturing Co. (110, Cheapside, London, E.C.). Antiphlogistine is an advance on the old-fashioned cataplasm and consists of a uniform paste with an agreeable smell due to well-known antiseptics. The basis is a pure silicate. Spread over the tissues antiphlogistine keeps them agreeably moist and has a decidedly sedative effect Ovolecithine is the pure distearo-glycerophosphate of choline prepared from the yelk of egg which has been used with advantage in those neuroses which indicate exhaustion of the nervous system. This interesting phosphorous substance may be had in the form of pills, confection, or injection which are supplied by Billon's Ovolecithine Co. (16, Water-lane, Great Tower-street, London, E.C.). Messrs Bengué and Co. (Paris and 35, Alfred-place, London, W.C.) exhibited specimens of "narcotile," the bichloride of methylethylene, together with an apparatus for its administration. On the same stall specimens of "anæstile," a mixture of ethyl and methyl chloride, were shown and also a number of appliances for administering anæsthetics Mr. W. Martindale (10, New Cavendish-street, London, W.), had a profuse assortment of medical apparatus, besides a number of pharmaceutical preparations Messrs. Cooper and Co. (80, Gloucester-road, South Kensington) included in their tastefully arranged exhibit their oxy-carbonated mineral waters and a number of beef preparations distinguished by the term "globena" The exhibit also included some special pharmaceutical preparations The Salt Union Limited, through their agents Weston and Westall, Limited (41, Eastcheap, London, E C), exhibited samples of Droitwich brine crystals which are specially well adapted for the preparation of brine baths They also showed specimens of a new table salt known as "star salt" which is so prepared that it does not absorb moisture and form into lumps in the salt cellar Messrs Arthur and Co (69, Berners street, London, W) exhibited a number of interesting pharmaceutical preparations amongst which was "bromaurum," a compound of gold, arsenic, and bromine that has been used with advantage in some cases of nervous diseases.

Next week we propose to give a brief description of some of the more important exhibits coming under the categories respectively of surgical and sanitary appliances, together with a few miscellaneous exhibits of interest to the profession

(To be concluded)

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ELECTION OF MEMBERS OF COUNCIL.

OF the three members of Council whose terms of office have expired Mr. A. Willett and Sir Frederick Treves, Bart, K C V.O., C B., do not intend to offer themselves for re-election, but Mr. H. T. Butlin will apply once more The only other candidates of whom we have heard are Mr. Clinton T. Dent and Mr. A A. Bowlby, C M G. The nomination paper of any other candidate must be received at the College not later than Monday, June 8th. The election will be held on Thursday, July 2nd.

ANNUAL MEETING OF FELLOWS

A meeting of the Fellows of the College will be held on Thursday, July 2nd, at 5 30 P M. Any motion to be brought forward must be received by the secretary not later than June 11th Unfortunately, no meeting of Fellows has been held for several years as a quorum has not been present. We hope that some motions of importance may be brought forward at the ensuing meeting so that a quorum may be obtained.

ASYLUM REPORTS.

Surrey County Asylum, Brookwood (Annual Report for 1902) —The average number of patients resident during the [illegible] ales The [illegible] 157 males [illegible] ions. Mr. [illegible] ates in his report that the type of insanity, especially among the female admissions, "showed no improvement as regards curability from that observed of late years." Only 30 per cent of the admissions were deemed to possess a fair chance of recovery More than 25 per cent were over 50 years of age and 64 of the 335 admissions had suffered from previous attacks of insanity. 37 were epileptic and 15 were the subjects of general paralysis of the insane. Two female patients were admitted whilst pregnant and were safely delivered during the year, the children being subsequently removed by the friends Congenital mental defect or a hereditary predisposition to insanity was found to exist in 32 per cent of the admissions The number of patients discharged as recovered during the year amounted to 91—viz, 47 males and 41 females, or 8 8 per cent. of the average number resident The deaths during the year amounted to 93, or 8·9 per cent. as calculated on the same basis Of the deaths five were due to pneumonia, six each were due to renal disease and general paralysis of the insane, eight to pulmonary tuberculosis, nine to cardiac disease, 10 to epilepsy, 11 to senile decay, 14 to organic brain disease, and the rest to other causes. "Of the 1070 patients remaining in the asylum at the end of the year," adds Mr. Barton, "hardly 5 per cent. were deemed curable. A great many were old and feeble" 127 were epileptic, 22 were sufferers from general paralysis, and 104 were idiot or imbecile. Although influenza was prevalent and caused at times considerable inconvenience when the nursing staff was attacked the general health throughout the year was good and the death-rate was below the average. Owing to the prevalence of small-pox and the occurrence of cases in neighbouring towns the asylum was closed to visitors from February to September and all the members of the staff who required it were revaccinated. There were only two serious casualties among the patients during the year, both being cases of fracture of bones due to accidental falls. Many alterations and additions were made to the buildings during the year. The Commissioners in Lunacy state in their report that the asylum continues to be maintained in excellent order, that the wards were very clean and comfortable, that the furniture and bedding were in good condition, that the patients were orderly and well behaved, and that the medical case books were well kept. The committee of management states in its report that the weekly charge of maintenance of the patients was 12*s*. per head. A new chapel for the patients was opened on Dec. 15th. A new reservoir capable of storing 750,000 gallons of water was nearly completed at the end of the year and has since been filled. The sum of £2500 was authorised to be spent in connexion with a central boiler house and the work was practically completed by the close of the year and within the expenditure authorised.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8662 births and 4307 deaths were registered during the week ending Saturday last, May 30th. The annual rate of mortality in these towns, which had been 15 9, 15 4, and 15·5 per 1000 in the three preceding weeks, declined again last week to 14·9 per 1000. In London the death-rate was 13·9 per 1000, while it averaged 15·3 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 7·2 in Wallasey, 8·0 in Hornsey, 8·2 in Handsworth and in Kings Norton, 8 5 in Croydon, 9 1 in York, 9 9 in Tynemouth, and 10 1 in West Hartlepool; the highest rates were 19 8 in Liverpool, 19·9 in Sunderland, 20 3 in Huddersfield, 20 4 in Merthyr Tydfil, 21 0 in Rotherham 22 1 in Rochdale, 23 0 in Manchester, 23 6 in Burnley, and 26·9 in Middlesbrough. The 4307 deaths in these towns last week included 434 which were referred to the principal infectious diseases, against 457, 428, and 461 in the three preceding weeks; of these 434 deaths 136 resulted from measles, 101 from whooping-cough, 65 from diarrhoea, 50 from diphtheria, 38 from scarlet fever, 25 from "fever" (principally enteric), and 19 from small-pox. No death from any of these diseases was recorded last week in Bournemouth, Northampton, Devonport, Kings Norton, Smethwick, Derby, Bootle, York, West Hartlepool, Tynemouth, or Newport (Mon.); while they caused the highest death-rates in Leyton, Hanley, Wolverhampton, West Bromwich, Coventry, Nottingham, Wigan, and Middlesborough The greatest proportional mortality from measles occurred in Walthamstow, Wolverhampton, West Bromwich, Coventry, Nottingham, Wigan, Middlesbrough, and Swansea; from diphtheria in Southampton and in Hanley; from whooping-cough in St. Helens, Oldham, and Rochdale; and from diarrhoea in Wolverhampton and Warrington. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns Of the 19 fatal cases of small-pox registered in these towns last week four belonged to Liverpool, three to Leeds, two to Leicester, two to Manchester, two to Hull, and one each to London, Willesden, Oldham, Burnley, Bradford, and Newcastle-on-Tyne The number of small-pox cases under treatment in the Metropolitan Asylums hospitals, which had been 60, 60, and 64 on the three preceding Saturdays, had declined again to 60 on Saturday last, May 30th, 10 new cases were admitted during the week, against 17, seven, and 19 in the three preceding weeks. The number of scarlet fever patients under treatment in these hospitals and in the London Fever Hospital at the end of the week was 1771, against 1720, 1756, and 1759 at the end of the three preceding Saturdays; 225

from the operation. I graduate the width of the strip to be removed according to the severity of the signs present (rarely exceeding six millimetres) and I make a point of removing all the subconjunctival tissue right down to the sclerotic and of dissecting up the flap as close to the cornea as possible. When only a small patch of pannus remains at one point I do a partial peritomy there. Should the result of the first operation not be as complete as one could wish, the circumcorneal tissue may be carefully destroyed at a subsequent sitting with the actual cautery. When a few large feeder-vessels can be distinctly traced into the still persisting area of vascularisation, I prefer gently to pick these out with the cautery for a few millimetres along the length of each. I never find chloroform necessary except in nervous children.

I am, Sirs, yours faithfully,
R. H. ELLIOT, M.B., B.S. Lond., F.R.C.S. Eng.,
Captain I.M.S.

Edinburgh, May 31st, 1903.

THE RETARDED PULSE WAVE IN AORTIC REGURGITATION.

To the Editors of THE LANCET.

SIRS,—If some physiologist of repute will assure me, either through your pages or in private, that the tracings published by Dr. Walter Broadbent in THE LANCET of May 23rd, p. 1443, represent anything definite I may then congratulate him on having come to the conclusion that the pulse in aortic regurgitation is not "always retarded or delayed"—a distinct statement made by Sir William Broadbent from which he cannot extricate himself. I am afraid that my critics do not realise that the tracings I have given are of a totally different standing; they will pass muster in any first-rate physiological laboratory and they are in themselves the clear evidence of what goes on. Not so my comments upon them. But as to the question asked by Dr. Broadbent at the conclusion of his communication, I might be permitted to call his attention to the explanation which I have given[1] of the slowness of propagation of the wave in aortic regurgitation compared with the high velocity of the wave created by *impact* when the valves are intact.

I am, Sirs, yours faithfully,
PAUL M. CHAPMAN, M.D., F.R.C.P. Lond.,
Physician, Herefordshire General Hospital.

May 23rd, 1903.

THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

To the Editors of THE LANCET.

SIRS,—In my letter which you published in THE LANCET of May 9th, p. 1328, I inadvertently stated that I paid £10 10*s.* for the primary certificate of Fellowship which purported to grant exemption from the subjects of the Primary Fellowship Examination; this should have been £15 15*s.* Also, the number of successful Fellowship candidates should have been 51 out of 52 persons who presented themselves at four successive examinations. In answer to Dr. G. Fleming of Ombersley, whose comments on my letter appeared in THE LANCET of May 23rd, p. 1477, I have to state that the Executive Committee of the General Medical Council did me the courtesy of considering and placing my report of the illegal examination on their printed minutes and transmitted a copy of the same to the President, Vice-President, and Council of the College "for their information." In a letter dated May 26th, 1903, the Registrar of the General Medical Council informs me "that the Council had reason to believe that a minute on the subject was sent by the Royal College of Surgeons in Ireland to the Privy Council." It is evident, therefore, that the Privy Council for Ireland, to whom I also reported the matter, has not been negligent.

Although Section XXVI. of the Medical Act, 1858, gives the General Medical Council the power of erasing higher qualifications from the Medical Register, further action on the part of the Council it would be unreasonable to expect, for it must be recollected that although the Irish College of Surgeons has only one accredited representative on the General Medical Council, Sir Charles Ball, it has in reality three members of the body corporate to espouse its interests, for the representative of the University of Dublin and the Direct Representative for Ireland are also members of the Council of the Royal College of Surgeons in Ireland. This circumstance, indeed, may be taken as a plea against Direct Representatives being members of the governing bodies of universities or colleges, as dual interests are obviously against impartial representation of the already too feebly represented general practitioner.

Referring to the refusal of the College of Surgeons to give a Licentiate a copy of the College by-laws, may I now place on record my sense of the untenable position the College is now placed in should it have reason to criticise the professional deportment of a Licentiate to whom it so openly refused their by-laws by "the advice of their solicitor?" Indeed, its criticism of any Licentiate's conduct now could hardly have other than ludicrous effect, considering the unfortunate manner in which they themselves are shown to have neglected their own charter responsibilities. The Royal College of Surgeons in Ireland has now been given ample opportunities of refuting any false statements I have made. Its irregular higher examinations I have shown up in the face of great opposition. In silence it has accepted the only verdict that can now occur to your readers. In concluding, therefore, this correspondence I take the opportunity of returning you my heartiest thanks for so kindly placing your columns at my disposal and I recognise in such editorial courtesy a continuity of that same public spirit which actuated the great Wakley, where abuses were to be corrected or grievances were to be redressed.

I am, Sirs, yours faithfully,
May 30th, 1903. S. WESLEY WILSON.

ACUTE AMAUROSIS FOLLOWING INFANTILE CONVULSIONS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 23rd, p. 1476, Dr. George Carpenter was good enough to comment upon some of the points raised by us in our paper under the above title.[1] Will you allow us to make one or two remarks in answer to his criticisms? In our paper we brought forward facts to show that a temporary amaurosis sometimes follows severe attacks of infantile convulsions and we sought to distinguish this group from the better known group of cases of amaurosis which follows an attack of posterior basal meningitis. In the former or post-eclamptic group we suggested that the blindness was due to a discharge from the visual centres followed by a condition of anæsthesia.

We need hardly say that we are conscious of the difficulties attending the diagnosis of the cause of the attacks of infantile convulsions in many instances and also that meningitis or a local encephalitis may be easily overlooked during infancy, especially in its initial stages. But putting doubtful cases on one side and taking the typical cases to which we called attention and which came under our own observation we cannot agree with Dr. Carpenter if he thinks that these were in reality cases of meningitis. Infants commencing with meningitis may or may not have convulsions, but no one can pretend that meningitis is a common cause of convulsions; indeed, the whole history of eclampsia and epilepsy disproves this. Surely because a neurotic infant has a feverish attack and severe convulsions ending in recovery we are not justified on such symptoms alone in diagnosing meningitis, even though the attack may have been followed by a fleeting amaurosis. Certainly, as a rule, if meningitis commences with convulsions the more characteristic symptoms of cerebral disease follow; they do not begin and end with fever, convulsions, coma, and recovery.

The pathology of the temporary blindness, hemiopia, aphasia, or paresis which sometimes follows convulsions or epileptic attacks is far from certain; there may be punctiform hæmorrhages, toxin poisoning, or, as we suggested as a cause for the amaurosis, a condition of exhaustion following discharge. That the more lasting hemiplegias or other paralyses which are associated at times with convulsions or whooping-cough, either one or both, are due to a meningeal hæmorrhage resulting from the stress and strain consequent on the convulsions and respiratory spasm is, we think, very probable and it is quite possible that the temporary loss of function which takes place may be due to a similar cause. With regard to another point raised as to the condition of the pupils and their reaction to light, our own experience is that in the early stages of amaurosis following undoubted cases of post-basal meningitis in infants the pupils are dilated and sluggish or do not react at all; later, as sight returns, the pupils react normally. This, however, does not seem to agree with the observations of some others. In our own cases of post-eclamptic amaurosis the pupils were active from the first.

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[1] THE LANCET, March 28th, 1903, p. 869.

[1] THE LANCET, May 9th, p. 1294.

We are, Sirs, yours faithfully,
HENRY ASHBY,
June 1st, 1903. SYDNEY STEPHENSON.

"OPTICIANS" AND SPECTACLE PRESCRIBING.

To the Editors of THE LANCET.

SIRS,—I have read with interest your leading article under the above heading in THE LANCET of May 9th, p. 1312. The sight-testing scheme of the Worshipful Company of Spectacle Makers is so much in the air at present that I do not propose to discuss it, but I do ask you to allow me to say a few words on behalf of the optician, as some of your statements are liable to misinterpretation. I do not for a moment wish to belittle the work of the ophthalmic surgeons of the present day, but that those of former years were not above giving the optician his due there is clear evidence.

You say that before the days of Brewster there was no common knowledge of the function of accommodation and you credit Young with the discovery of astigmatism. Young claims the discovery of the function of accommodation also. As a matter of fact, he did not discover either of these things; he simply quoted what was common knowledge at the time. Young, who was then a student aged 20 years, read a paper before the [illegible] May 30th, 1793, entitled "Observat[illegible] *he announced* that he had discovered the muscularity of the crystalline lens. This so-called discovery was also claimed by the celebrated John Hunter, whose lectures Young was attending at the time. Young does not appear to have been imbued with the courage of the average discoverer, however, for he shortly afterwards abandoned the idea in a lecture at Göttingen, only to take it up again at a later period.

I discredit Young's discovery because on turning to an "Essay on Vision" by George Adams, the optician of Fleet-street, printed and published in 1792 (the year before Young's lecture), I find that Adams had a very clear notion of the function of accommodation and his reasonings are so good that they are quoted by leading oculists for many years after, such as Dr. Kitchener in 1826, Dr. Middlemore in 1835, and Dr. John Stevenson, oculist to the King, in 1834, who in his book, "Weakness of the Sight," advises his fellow practitioners to read the essay of George Adams the optician. To go back further still, Emerson the mathematician in his "Elements of Optics," published in 1768, says: "Tho' men may see distinctly at different distances by *altering* the *position* and *figure* of the *crystalline*, yet they can only see distinctly within certain limits and nearer than that objects appear confused."

As late as 1846, in a "Treatise on the Eye," Dr. W. C. Wallace speaks of accommodation being caused by the external muscles, advises people to defer wearing glasses as *long as possible,* and *recommends medicine as a substitute* for spectacles, and to this work there is a recommendatory notice by Sir David Brewster. Contrast this with the clear statement of Coddington who certainly was not a medical man. In an "Elementary Treatise on Optics" dated 1825 he says: "By means of a certain muscular mechanism which increases or diminishes at pleasure the convexity of the crystalline the form of the eye is modified so as to throw on the retina distinct images of all objects between very wide limits."

The reluctance of the medical profession to adopt the correct theory of accommodation by alteration of the crystalline is further shown by Dr. F. H. Butt who in 1847 still sticks to the notion of contraction of the pupil. I think this disposes of Young's discovery of the theory of accommodation, and I am afraid that he cannot in the face of his own statement be given much credit for originality in regard to astigmatism, for the following is a quotation from his miscellaneous works edited by George Peacock, M.D. *After describing the effect of the difference of focus* in the two meridians of the eye, he says: "On mentioning this circumstance to Mr. Cary the optician he informed me that he had *frequently taken notice* of a similar circumstance; that many persons were obliged to hold a concave glass obliquely in order to see with distinctness, counterbalancing the too great refractive power of the eye in the direction of that inclination and finding but little assistance from spectacles of the same focal length." It is tolerably clear from this that Cary the optician knew as much about astigmatism as Young did, particularly when the latter goes on to say, "The difference is *not in the cornea*, for it exists when the effects of the cornea are removed by immersing the eyes in water."

Then for the final discovery of the method of adapting cylindrical lenses to correct astigmatism, probably one of the most beneficial inventions of the nineteenth century, we have to thank Professor Airy, not a member of the medical profession, and even after this discovery it was not customary among oculists to prescribe cylindrical lenses until Andrew Ross, Dixey, and other opticians had become expert in making the lenses and correcting the defect. No suggestion ever appears to have been made by a medical man as to how the defect should be corrected; the very name was given to it by a parson, the Rev. Dr. Whewell.

That the opticians frequently had to correct the oculists' prescriptions in those days is shown by the fact that Dr. Harrison Curtis in his work on "Diseases of the Eye" published in 1833, has to chide his fellow physicians for prescribing amber lenses, quoting Peter Dollond the optician as his authority that they were injurious. I could carry these quotations on indefinitely, but think I have given sufficient to prove that the optician had a fair claim to knowledge in the old days and it is certain that the study [illegible] to pass the examinations of [illegible] day will not tend to lessen either his knowledge or general intelligence and the time is not far distant when ophthalmic surgeons will recognise that the opticians are their best friends, because the knowledge that they are acquiring will enable them to recognise disease in cases which now only come under the surgeon's notice when too far gone to remedy.

I am, Sirs, yours faithfully,
May 25th, 1903. JAMES AITCHISON.

To the Editors of THE LANCET.

SIRS,—I believe it to be contrary to your usual custom to publish in your columns a letter from a non-medical correspondent, but I trust that an exception will be made with this which refers to the leading article that appeared in your issue of May 9th, p. 1312, entitled "'Opticians' and Spectacle Prescribing." My letter, if published, may possibly tend to have some effect towards clearing a somewhat cloudy atmosphere and I am sure that the opticians who possess the diploma of the Worshipful Company of Spectacle Makers have an earnest desire to work in harmony with the medical profession.

All discoveries in optics have been made by opticians—whether medical men also or not is beside the question—and although discovery by one does not confer a privilege on another, yet if it did the application of lenses so as to alter the course of light which enters the human eye, would pertain to the optician, medical or other, and certainly not, I submit, to the physician *per se* who, indeed, may not be an optician at all. The adaptation of glasses for visual errors, being neither surgery nor medicine, has always been the work of non-medical opticians and so long as exact knowledge in matters optical was rare there seems to have been no opposition to it on the part of the medical profession. The question really at issue is simply whether it is better that spectacles should be sold by those who have a knowledge of optics or by those who have not.

That there has been an enormous increase in the number of glasses used within late years is an undoubted fact, this [illegible]ed knowledge and better procedure on [illegible] I do not [illegible] in the use [illegible] people at large. And the more the use of spectacles is appreciated by the public the greater the number of those who consult the oculist. Moreover, while the dealer who sells spectacles as he would pounds of sugar will supply them to all and every-one he who understands his work will at once recognise those cases which lie outside his province and refuse then to supply glasses except under the prescription of the oculist. I do not think that I exaggerate in saying that the optically educated optician will refer a dozen cases to the medical man while the optically uneducated optician will refer one.

And it must be obvious that it is impossible for the spectacle-vendor to know whether there be a diminished visual acuity or symptoms suggestive of serious muscular trouble or of disease or that the application of a mydriatic seems desirable, or that the condition seems complicated, unless he does follow a proper routine when a customer comes to him for optical aid.

Your article admits that "in the great majority of cases reading spectacles can be safely and well supplied by rule of thumb without further examination than can be accomplished by any of the ordinary forms of optometer." Since this is admitted, then surely must be the adaptation of distance glasses, for whatever may be the error of refraction in near vision such must also exist in distant vision; emmetropia being an exceptional condition, of course the emmetropic presbyope is a rarity and even he would, later on, become ametropic. The optician who does not test sight cannot know to what cases he may safely supply glasses and to what cases he should not; again, if he is able to discriminate by proper testing between the two, then surely he must be in a position to supply the correction where there is no indication of any trouble beyond that of uncomplicated erroneous refraction. You say that in consulting a medical man there is an "insurance against the existence of any actual or incipient disease which the spectacle-seller would be liable to overlook." This is indeed a fact, and it emphasises the great necessity for the education and certification of the refractionist in the work in which he is daily engaged.

Technically educated opticians now begin to recognise their own sphere and that of the medical man and this obtains to an extent already out of proportion to what was the case before the Spectacle Makers' Company's scheme came into existence. The difference in this respect between those opticians who have and those who have not yet associated themselves with the Spectacle Makers' Company is very marked. The principal point at issue in the optical world at this moment is whether the Spectacle Makers' Company shall crown their efforts for safeguarding the public and regulating the status of the optical industry by adding to their present examination one which includes spectacle-fitting or sight-testing. This suggestion, I venture to submit, ought to receive the highest encouragement from the medical profession as a step in the right direction for the benefit of all concerned—the public, the trade, and the profession itself. The present examination of the company only covers the subject of applied optics up to a stage which is short of the adaptation of glasses, while at the same time fully 90 per cent. of the diploma holders are daily engaged in this work. It is work needed by the public and was a prerogative of the industry, indeed, for centuries before the company undertook their modern system of examination. It must, then, be only right in the interests of everyone that the diplomates of the company should show by the ordeal of a proper examination that they possess the necessary information—not only an acquaintance with what they may and should do for the correction of optical visual defects but an acquaintance equally with the corresponding limitations, a sufficient knowledge of those circumstances under which medical treatment or the advice of an oculist may be necessary.

I am, Sirs, yours faithfully,

May 18th, 1903. LIONEL LAURANCE.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Plague Epidemic.—The Loss of Life from Wild Animals.

THE outbreak of plague for this season in India has passed its period of highest mortality and is now subsiding. In the Madras Presidency, which has never returned more than a few hundred deaths in a week, the mortality has sunk to 24, but in the Punjab, where the outbreak was the latest to develop, the deaths last week were 16,212. In the Bombay Presidency, where we have been accustomed to note thousands of deaths a week for a very long time past, the weekly record has sunk to 1242. In Bengal also the last return shows only 351 deaths and the recrudescence in Calcutta has nearly died out. Bombay city and Karachi are still suffering severely and 1160 deaths occurred last week in the United Provinces. The total mortality throughout India for last week was 20,264 as compared with 24,335 for the previous seven days and with 28,146 for the week before that. Taking the figures generally it is to be noticed that the outbreak has developed later in the season and has lasted longer into the hot weather. This, curiously, seems to be the feature of each recrudescence as compared with its predecessor. In Calcutta, however, so regular has been its incidence that the number of deaths for any particular week can almost be calculated beforehand. Another feature worth noting is the similarity in the number of deaths for each outbreak in certain places. Bombay city has had about 25,000 deaths each season, Calcutta about 10,000, but other places have varied considerably.

The Loss of Life from Wild Animals.

The destruction of life in certain parts of India by wild animals can only be emphasised by recording figures. In the Central Provinces alone 513 human beings were killed by wild beasts and 1304 by snakes during the past year. As a recent writer has endeavoured to minimise the work of the Pasteur Institute at Kasauli it may be worth mentioning that from this one district 56 people died from rabies after bites received from jackals. This danger exists over the greater part of India and the total mortality from rabies is probably considerable. The great mortality from snake-bite indicates the necessity of a more wide distribution of antivenene. The Jubbulpore district stands out as in particular danger from snakes. Over and above this destruction of human life something like 12,000 domestic animals were killed by snakes in the Central Provinces alone—a pecuniary loss which the sporting instincts of Europeans and the rewards for natives do not seem to prevent.

May 16th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Walk from Manchester to Southport.

THE example set by the recent walk from London to Brighton has soon been followed by a Manchester to Southport walk. Whether this is the result of emulation or merely an example of the imitative instinct existing in man and some of the lower animals it is scarcely worth while to inquire, but it is comforting to know that the art of walking is not to get lost. Many of us would also commend these walking contests as being harmless to the ordinary users of the King's highway. The main roads of the country, even in comparatively remote districts are now so dangerous that timid or nervous people are afraid to venture on them. They have got accustomed to the comparatively innocent cyclist but they look with dread at the motor-cycle as it rapidly approaches with its tiresome knock, knock, knock—which, however, must be looked on as tending to safety—and with horror at the motor car with its goggled, veiled, and dust-begrimed occupants leaving their taint behind them as refreshment for those who have escaped destruction. Seriously, however, the roads are being made almost unusable by ordinary people either for walking, riding, or driving, for not only is the danger by no means imaginary as the daily papers show, but the dust nuisance is at times almost intolerable, and, of course, by no means innocent of danger. Possibly the selfish craze for immoderate speed on the ordinary high-roads may subside by-and-by either as the result of convictions for manslaughter or on more æsthetic grounds. In the meantime one turns with some satisfaction to the record made by 100 or 101 men who walked the 41½ miles on May 23rd between Manchester and Southport. The winner covered the distance in 7 hours 11 minutes 8 seconds, while the second man was only two seconds later, and the third man was not far behind. The others tailed off for nearly three hours, but the last got in just under 10 hours. Two sisters 18 or 20 years of age, living in Moss Side—from which district, curiously enough, the first and second of the men hailed—started on their own account rather earlier than the men and walked the whole distance and said that they were in no way exhausted by their 10 hours' continuous walking. It does not appear that there had been much special training among the competitors but most of them were fond of various forms of exercise. "There were solicitors, stockbrokers, accountants, medical men, chemists, bank clerks, warehousemen, a Walkden collier, a

Salford policeman, young men with smooth chins, business men well advanced in the forties, and a wrinkled veteran of the Indian mutiny." It speaks well for the endurance of the men that at the dinner in the evening they appeared very little the worse for their walk. The mayor of Southport presided and presented a silver cup, photographs, and a medal to the winner and medals to the second and third and promised mementos to the two young ladies who on their arrival in Southport were at once invited to the dinner. Within reasonable limits the resuscitation of walking as an exercise is desirable, but it seems as if in these days nothing is thought worth doing for its own sake but only in competition with others and for the sake of making a record. In one long-distance walk those engaged, who must be "amateurs"—a word now of somewhat doubtful meaning—"may be paced by cyclists." These contests seem to be springing up like mushrooms all over the country and as in most cases the competitors are accompanied by cycles and motor-cars there will be an accompaniment of noise, dust, and smell which some found sufficiently trying on this recent occasion Some thought cramp in the thighs would have stopped them, others suffered from "stitch," and sore feet were not rare. The winner is said to be "a total abstainer and a non-smoker only when he is in training," the second being a total abstainer and non-smoker.

The Manchester Infirmary.

Some members of the infirmary board are spending the Whitsuntide holidays in visiting the most important hospitals in London, Scotland, and elsewhere. The knowledge which they thus obtain will help them considerably in the great work they have in hand.

Shell-fish and Sewage.

Looking at the expanse of the Duddon sands one would not associate them, without some evidence, with the indictment recently found against them. "Owing to the many cases of poisoning by eating shell-fish contaminated with sewage matter," the Millom urban district council had a number of mussels and cockles taken from the sands analysed. Dr. R. T. Hewlett, of King's College, London, examined 36 specimens and found them "swarming with bacteria" and said that the beds must be seriously polluted with sewage. The samples were got from three different places, one bed being "12½ feet under water at low water." This is without much doubt an illustration of the state of things all round our coasts. "It was decided to issue notices to the public warning them against eating this shell-fish." As long as our present mode of disposing of the sewage of seaside places is continued we shall have constant repetitions of the above story. It is the readiest and least troublesome method to turn the sewage right away into the sea, forgetting the penalty to follow in the sickness and loss of life entailed, in the injury to the local reputation sure to follow, and when the fact as to the danger of sewage poisoning is known the loss of a valuable food-supply and the consequent suffering and privation of the mussel-gatherers. The return of sewage to the land is the unattained, but surely not unattainable, end to be sought and, at all events, it is quite clear that sewage ought not to be so disposed of as to make the eating of a cockle, a mussel, or an oyster, or even the humble periwinkle, an operation to be performed at the risk of life.

The Dangers of Electricity.

About three o'clock in the morning, fortunately, of May 24th a serious explosion took place in Manchester, wrecking the basement of one warehouse and followed by a fire in the cellar of another next door. It was found that there had been a fusion of electric wires, but whether in these premises or in the street cables does not seem to be certain. Before a proper inspection could be made an explosion "shattered the doors, windows, railings, woodwork, and glass" in one basement and "fragments of timber were hurled across the street with sufficient force to break in a door on the opposite side of the road. Three large stone steps about two yards long and weighing five or six hundredweight each were shifted about three yards and piled one above the other," while other damage was also done "The cause of the explosion and also of the fire are not at present explainable." Such is the usual statement about these too frequent occurrences, but it is pretty certain that they would not happen if sufficient care were taken. Knowing though they do the enormous power of the agent which they are endeavouring to control and to break in to our service, the electrical engineers from their familiarity with the matter may perhaps forget that their supposed servant will, if they are not very careful, turn out to be master and it may be doubted if the necessity for extreme care as to fittings and insulation is always realised by them and by the workmen employed by them.

"A Doctor's Error."

The above heading occurs over the report of an inquiry into the cause of death of a member of the town council of Blackburn which was held on May 26th. His medical attendant made up for him a bottle of medicine and a liniment of aconite, belladonna, and chloroform, and through [illegible] "he must inadvertently [illegible] for the label he was [illegible] verdict of 'Death from misadventure' and expressed the opinion that liniment should be placed in bottles of a distinctive shape and labeled 'poison.'" They condoled with the bereaved family and the foreman referred to the medical attendant's manly admission of his serious error saying that his conduct had not been evasive but open from beginning to end.

June 2nd.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Pontypridd Workhouse Extension.

IN spite of the good wages and regular employment which have prevailed for several years past in the districts which comprise the Pontypridd Poor-law union it has been found necessary to increase the workhouse accommodation. The present workhouse, which was erected in the year 1865 and has been from time to time enlarged until there is now room for 320 inmates, is situated in the town of Pontypridd on a site where there is no adjacent land available for further additions The total population included within the area of the union is over 200,000 and 120,000 of these reside in the two Rhondda valleys, the nearest portion of which is distant about two miles and the furthest about 12 miles from the workhouse. The board of guardians very properly, therefore, decided to establish a secondary workhouse in the centre of the large Rhondda population and within the next few weeks buildings will be brought into use which have been erected at a cost of £12,000 for the accommodation of 60 men, 30 women, and 12 married couples The institution includes a house for the master with a board-room and extensive store-rooms, four separate pavilions, and a lodge. Three of the pavilions are two storeys high and are arranged on identical lines. On the ground floor there are two day-rooms, a large kitchen and pantry, a bath-room with two stoneware baths, and a lavatory with a range of four basins. On the first floor there are three wards to accommodate 11, 11, and eight persons respectively, a nurses' bedroom and sitting-room, four water-closets, and two slop sinks The site of the buildings on the hillside lends itself well to the provision of fire-escapes from the upper floors of the pavilions where in the two largest wards a door opening outwards gives exit to a bridge terminating on the slope of the hill. The fourth pavilion is one storey high and is for the accommodation of 12 married couples, each of whom has a bedroom measuring 15 feet by 12 feet in which there are two fixed cupboards, suitable hanging pegs and furniture, and a fireplace with a Dutch oven. For the use of each six couples there are two baths, two lavatory basins, two water-closets, and a large kitchen centrally situated; in this pavilion are a double-bedded room for nurses and a large sitting-room. Some care has been taken in the design of these buildings in the direction of avoiding dust-collecting ledges; for example, there are no architraves to the windows, although they are provided round the doorways while there are several exposed beams which will be difficult to keep free from dust. The buildings are constructed of local stone with pebble stucco; the inside walls are covered with a smooth adamant cement. Taken as a whole, the Pontypridd board of guardians may be congratulated upon the acquisition of a well thought-out and excellently planned institution.

Llanelly Cottage Hospital.

The Llanelly Cottage Hospital, which was established in 1867 and has now accommodation for 30 patients, is in a much more prosperous condition than it has been for many years. The committee of management is composed jointly of employers and workmen and of the £1500 contributed during the past year towards the funds of the institution no less a sum than £621 was obtained from periodical collections made in the works of the district. A further sum of £400 was the result of a fête organised by Mr. Studt, a popular Welsh showman, through whose coöperation many hospitals in the Principality benefit every year.

Weston-super-Mare Children's Convalescent Home.

This excellent institution has now been established about nine years and is for the benefit of children attending the public elementary schools in Bristol and of those who have been inmates of the Bristol hospitals. At the annual meeting which was held on May 29th it was stated that 324 children had been in the home during the past 12 months and that the total expenses had been only £547.

New Asylum for Newport.

A new asylum is being erected for the Newport (Mon.) corporation on a site near the river Usk at Caerleon and the foundation stone was laid on May 27th in the presence of a large gathering. The asylum when complete will accommodate 368 patients (184 of either sex). At present it is intended to proceed with the erection of six blocks of the building.

June 1st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow Obstetrical and Gynæcological Society: Visit of Dr. Howard A. Kelly.

MEDICAL practitioners in Glasgow and the West of Scotland will be interested in hearing that Dr. Howard A. Kelly of Baltimore, the honorary President of the society, is to visit Glasgow and to deliver the presidential address in the Faculty Hall on Wednesday, June 17th, at 8 30 P.M. The subject that he has chosen is one of general interest, the History of Appendicitis in Great Britain. All medical practitioners are invited. I understand also that the Edinburgh and Glasgow Obstetrical Societies are to meet in joint session in the same hall on the following day at 5 30 P.M., when Dr. Kelly will introduce a discussion on the Extirpation of the Uterus and Appendages in Serious Pelvic Inflammation, and the two societies are afterwards to dine together in the neighbouring Windsor Hotel.

Aberdeen University Medical Society.

The summer session of Aberdeen University Medical Society was opened on May 29th with a lecture by Dr. J. Marnoch on Recent Works and Opinions on the Etiology of Cancer. Professor J. T. Cash presided and with him on the platform were Dr. Angus Fraser and Dr. Ashley W. Mackintosh. The chairman congratulated the large number of members present on the continuance of their meetings in the summer time when there were so many attractions of other kinds. Dr. Marnoch needed no introduction to them. He knew his subject and was an excellent teacher. Dr. Marnoch then gave in review the work recently accomplished in connexion with cancer. Dr. A. Wolff had recently shown from statistics collected throughout Europe that high cancer areas were associated with (1) districts which were well wooded, especially if they were also well watered, a result in direct variance with statistics previously obtained from England and Wales; and (2) districts where much beer and cider were drunk—e.g., Bavaria and Lille. The deaths from cancer in the eight principal Scotch towns in 1872, with a population of about 1,000,000, were 445; in 1902, with a population of about 1,500,000, they were 1523; so that cancer was on the increase in spite of allowing for increased accuracy of diagnosis. The parasitic and the anti-parasitic views were then discussed and the lecturer showed that the bulk of evidence was against the disease being parasitic in origin. On the conclusion of the lecture Dr. Marnoch was heartily applauded. Dr. Fraser said that he had learned a good deal and had listened with the greatest pleasure and instruction to the admirable *résumé* on cancer from Dr. Marnoch. He had had the modesty not to refer to it, but Dr. Marnoch had done original work in the matter himself and was therefore all the more entitled to speak with some authority on the subject. He had pleasure in moving a hearty vote of thanks to Dr. Marnoch for his interesting and educative lecture. Dr. Marnoch, in replying, congratulated the society upon its vitality. The meeting terminated with a vote of thanks to the chairman, proposed by Mr. George Hall.

June 2nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Nursing Scandal at Granard Union.

THE prolonged inquiry by the Local Government Board into the state of things which prevailed in the union hospital at Granard has at last come to an end. After considerable delay the decision of the Board was recently conveyed in a letter to the guardians read at their meeting on May 18th. The letter stated that the evidence "revealed a condition of things regarding the provision made by the guardians for the care of the sick and infirm which may be described as shocking." It contains a long indictment of the guardians for their neglect and for their failure to support their medical officer in the reforms which he attempted to bring about. Their action in calling on Dr J. M. S. Kenny to resign because he would not permit a wardsmaid to do nursing duties after a trained nurse had been engaged, is described in the report as "a most improper attempt to intimidate an officer in the conscientious discharge of his professional duties." The report states that "the list of nursing duties that the nuns of Granard workhouse gave as outside their province as nurses in charge of sick wards came upon the Local Government Board as a surprise." Another meeting of the guardians took place on the 25th, when a letter from the sisters tendering their resignation was received. A committee of the guardians waited upon them and they consented to remain for the present in the workhouse provided that "the board would insist on Dr. Kenny not making use of insulting and abusive language to them in the interval and that a ruling to this effect was inserted in the minutes." A resolution to that effect was passed accordingly and subsequently it was resolved:—

> That having now heard the report of the Local Government Board in regard to the recent sworn inquiry—an inquiry which took up much time and cost so much to all parties—that the Local Government Board be requested to state why in framing their report they did not go into the real root of the evil, namely, the want of harmony between Dr. Kenny and the nursing staff, and that inasmuch as no improvements in the house can, in our opinion, stop this long existing friction, we now ask the Local Government Board either to go into the matter or give their reasons for passing it over.

The nursing sisters at Mullingar union hospital have since resigned in consequence of the action of Dr. Kenny and the Local Government Board but have agreed conditionally to remain in charge of the infirmary for one week.

Distinctions won by Students of Queen's College, Cork.

At the recent medical examinations at the Royal University two Cork students were particularly successful. At the second examination Mr. W. A M'Kee was awarded first-class honours and a first-class exhibition of the value of £25. No other student obtained honours or an exhibition at this examination. At the M.B., B.Ch., B A.O. degrees examination Mr. Norcott Harvey, also a student of the Cork College, was awarded first-class honours and a first-class exhibition of the value of £40. He was the only one of the candidates who won those distinctions. That means that in these two examinations students of Queen's College, Cork, headed the list. At the examinations at the Royal Colleges of Physicians and Surgeons of Ireland held about the same time another Cork student, Captain Dorgan, R.A.M.C., a candidate for the diploma in sanitary science, obtained first place in all Ireland and was awarded honours.

Dispensary Contest in the Ardee Union.

In THE LANCET of May 23rd, p. 1484, it was announced that on May 5th Mr. W. H. Crean of Dungarvan was elected medical officer of Drumconrath dispensary in the Ardee Union, co. Louth. The original salary was £120 per annum and £30 as medical officer of health. The two local men, in loyal adherence to the resolution of the local branch of the Irish Medical Association, declined to become candidates until the salary was raised to £200, the minimum suggested by that association. On May 14th, at a meeting of the county Louth branch of the Irish Medical Association, the following motion was unanimously passed:—

> That we, the members of the Irish Medical Association, reiterate our determination to adhere to the resolutions of the Irish Medical Association dealing with practitioners who take dispensaries under the stipulated salaries.

At a meeting of the Ardee board of guardians held on May 19th a letter of resignation was read from Mr. Crean. The Drumconrath dispensary is therefore still vacant after three attempts at an election. This is a great victory for the Irish Medical Association and is in favour of combination.

The Irish Medical Association.

The annual meeting of the Irish Medical Association is to be held in Enniskillen on Wednesday, June 17th, under the presidency of Dr. L Kidd, surgeon to the Fermanagh County Infirmary, and owing to the very keen interest aroused at present in the conflict between the Poor-law medical officers and the local and central authorities the attendance promises to be a record one. The following is the programme:—

own-hall, Enniskillen, at 2.15 P.M., Minutes of the meetings held on 1902. Report of the council and

Motions to be Brought Forward.

1. That the report of council and financial statement for the past

Proposed Scheme.

The Council recommend the following resolutions and invite discussion thereon:—

3. That the minimum salaries for dispensaries be £200; for workhouses, £120; or both combined, £300.

4. That medical officers in the Poor-law service be entitled, as a matter of right, to superannuation on the Civil Service scale.

5. That all medical officers in the Poor law service be entitled to four weeks' annual vacation in accordance with Article 28 of the Local Government Board rules; and that the payment of the locum tenens be as provided for by Section 5 in the Local Government Amendment Act, 1902.

6. That the fees for discharge of temporary duty be:—

	£	s.	d.	
Dispensaries	4	4	0	per week.
Workhouses	3	3	0	"
Both combined	5	5	0	"
Periods less than a week	1	1	0	per day.

7.

	£	s.	d.
stance			
...	3	3	0
ce up	2	2	0
(c) Between 8 A.M. and 8 P.M. and for any distance	2	2	0
... ...	2	2	0
... ...	1	1	0

Distance not to exceed in either case 12 miles.

8. Appointment of two auditors.

A banquet will be held in the same place in the evening at 7.45 P.M. and on Thursday, June 18th, an excursion will take place to Bundoran. The railway companies are issuing return tickets from all parts of Ireland available from June 15th to 18th inclusive at a fare and a quarter for all classes.

Medical Fees in Omagh Union.

In THE LANCET of May 23rd, p. 1465, reference was made to the extraordinary treatment of Dr. E. C. Thompson, M.P., by the Omagh guardians in having summarily dispensed with his services while acting for Dr. H. B. Fleming who was ill. Dr. Thompson demanded £12 12*s.* for his four days' attendance at the workhouse. At the meeting of the guardians on the 30th the clerk suggested that the guardians should offer Dr. Thompson £3 3*s.*, the amount he said required by the Tyrone Medical Association. The chairman said that in addition to tendering this sum they should add that they were sorry Dr. Thompson should feel that they did not treat him with the same courtesy that he expected.

Extraordinary Action of the Irish Local Government Board.

Dr. John Bolster having resigned the Tinahely dispensary, co. Wicklow, the Shillelagh guardians decided to increase the salary for the incoming medical man by £30, making it £150, instead of £120 as formerly, fearing they might not have applicants at the old salary. When asked to sanction this arrangement the Local Government Board refused to approve of the increase, as it understood that there was good private practice for a medical officer at Tinahely and that it saw "no reason to doubt but that a number of eligible candidates will offer themselves for the vacant dispensary at the existing salary and emoluments." The chairman of the board of guardians, when this communication from the Local Government Board was read, said he supposed that any expense they would go to in advertising the appointment at £120 a year without getting any replies would be borne by the Local Government Board. It is to be hoped that no medical man will apply for the post in order to teach the central authority (the Local Government Board) in Dublin a salutary lesson. Its action in this matter is most insulting to the medical profession and is extremely stupid when taken with the fact that it constantly replies to the demands of the Poor-law medical officers that it is no use agitating for higher salaries when on the occasion of any vacancy numbers apply at the old rates. The truth is that in Ireland at present the Local Government Board, from its want of pursuing a consistent policy, is being very greatly discredited.

June 2nd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Syphilis and Suicide.

AT the meeting of the Academy of Medicine held on May 19th Professor Fournier discoursed upon the question of suicide in syphilitic patients. He had had personal experience of 18 cases and many others had been observed by his colleagues. Professor Fournier has done more than anyone else to enlighten the public as regards the terrible dangers of syphilis He is anxious that this plague should be brought into the full light of day, for it is not made enough of. Syphilis, he added, requires a long and patient treatment, for it has terrible hereditary effects and causes veritable social ravages. The extremely active anti-syphilitic campaign initiated by Professor Fournier

any cure for the various manifestations of the disease, the knowledge of which makes them lose their courage; (3) nervous patients who kill themselves on learning the nature of their disease; and (4) those who discover their complaint on the eve of marriage and do not stop to find any other way of breaking their engagement. Professor Fournier implored all medical men to use great tact in announcing their diagnosis to nervous and impressionable subjects and reminded his audience that syphilis as a whole is one of the most easily curable diseases

Surgical Intervention in Pulmonary Gangrene.

For two successive meetings the Society of Surgery has been discussing the subject of pulmonary gangrene and the surgical relief of this condition. The first meeting was held on May 13th when M. Lejars related many cases occurring in his own practice in which he had interfered surgically. He reminded his audience that not all cases of pulmonary gangrene were fitted for operation. Interference should only be undertaken when the gangrenous foci were strictly localised and limited; moreover, stethoscopy by a trained ear was to be relied upon in diagnosis far more than any other method. Radiograp

most uncertain results. The

sufficiently healthy state to

a possible infection from the diseased side. As a rule the operation is easy, although sometimes difficult owing to the existence of multiple gangrenous foci. M. Lejars laid stress on one point in the technique of the operation—namely, that a large opening should be made in the thorax in order to have plenty of light and also that later the chest wall might easily fall in so as to fill up the void caused by the retraction of the pulmonary tissue. Although cases of cure by operation are not rare, yet they are not absolutely lasting. Statistics cannot yet be furnished of the frequency of relapses but they are fairly numerous. At the adjourned meeting held on May 20th M. Tuffier spoke. He agreed with M. Lejars, but he added that they must not forget that surgical interference only substituted artificial for bronchial drainage. If the latter were sufficient it was useless to interfere; if not, a free thoracotomy must be done, only as far as possible the operator should avoid opening the pleura. Prognosis varied in every case and depended mainly upon the cause of the gangrene. Interlobar pleurisy with superficial gangrene must be distinguished from pulmonary gangrene properly so called. It is true that the diagnosis between these two forms is difficult, but it should be made where possible, for the prognosis of the two is very different. It is important to ascertain whether the gangrene is accompanied by bronchiectasis, for in such cases complete cure is rare. M. Tuffier concluded by remarking that gangrene is sometimes due to a foreign body. He had seen two cases of gangrene following the removal of adenoid vegetation. In the one case he had had to open two interlobar abscesses and the patient recovered. In the other case there was a fœtid cerebral abscess and the patient died. In another case under his care gangrene was caused by a portion of the bone of a calf. M Tuffier opened and drained the abscess. The cavity, however, took eight months to close and the patient had constant cough. In 11 cases M. Tuffier had four deaths and seven recoveries. Of the deaths three were due to secondary hæmorrhage and the fourth to septicæmia. Of the seven recoveries two were complete and five were incomplete.

June 3rd.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

The Lady Minto Hospital Fund.

NOT long since the Countess of Minto invited a number of the business men of Ottawa to Government House, when she explained in an address what had been done in connexion with the Lady Minto Cottage Hospital Fund. The sum of $20,000 had been raised and with this sum the districts which were considered to be most in need of hospitals had been assisted. Ten hospitals are now in working order and four new ones will be opened shortly. There are now 68 nurses of the Victorian Order in active work, some being employed in hospitals and the rest in district nursing. The 18 towns that employed these nurses raised their funds locally to pay their salaries. Her Excellency pointed out that the central fund had been supported from three places—Montreal, Toronto, and Ottawa. This she considered unfair, as the scheme affected the whole Dominion. Her object is now to raise an endowment fund which will realise an income of $5000 per annum. Dr. T. Gibson of Ottawa, the honorary secretary of the Victorian Order, stated that it was the desire of Lady Minto to have the endowment fund raised before her departure for England. The capital sum aimed at was $123,000 and towards this end a few gentlemen of Montreal had already contributed $36,500. A committee of the business men of Ottawa was formed to commence the work of organisation and to secure subscriptions.

Tuberculosis Conference.

The Governor-General, Lord Minto, delivered an address at the third annual conference of the Canadian Association for the Prevention of Consumption held at Ottawa on April 15th. He stated that he believed that there were annually not less than 30,000 cases of consumption in the Dominion of Canada and that the number of deaths was about 9000. The association had performed a great service by drawing the attention of the public to the ravages of the disease. Dr. H. Beaumont Small of Ottawa read the annual report which dealt especially with the educational propaganda which had been carried on during the past year. In Canada out of 36 hospitals only 13 had special accommodation for the treatment of tuberculous patients. Dr. A. J. Richer of Montreal, honorary secretary of the Montreal League for the Suppression and Prevention of Consumption, which has lately been affiliated with the central body at Ottawa, read a paper on the Economic Aspect of Tuberculosis in which he estimated the annual loss to Canada from tuberculosis at $72,000,000, which was based on the deaths and sickness from the disease. He further contrasted the action of the Dominion Government in relation to its expenditure annually in the prevention of tuberculosis in the animal and human kind. While the Government had spent last year $1000 in the prevention of tuberculosis in the human being, it had expended nearly 40 times that amount in the same cause amongst cattle.

The Insane in British Columbia.

Dr. Manchester, the medical superintendent in charge of the provincial asylum for the insane at New Westminster, British Columbia, has issued his official report for the past year. The year commenced with 284 patients in residence in the institution and eight on probation. During the year 121 new patients were admitted, 95 males and 26 females. The increase in admissions as compared with the previous year numbered six, all males. The discharges numbered 61 and the deaths 26, these figures being almost identical with those of the previous year. The year closed with 16 patients still on probation and 311 in residence. Of the total number admitted 50·41 per cent. were discharged, not including the deaths, 24·8 per cent. recovered and 25·6 had not recovered. In some quarters it seemed to be the prevalent belief that the percentage of insanity was higher in the province of British Columbia than in any of the other provinces of the Dominion, but Dr. Manchester in his report disproves this and states that quite the reverse is true. The total number of insane in the entire Dominion of Canada according to statistics is 16,495, or 3·1 per 1000 of population. In British Columbia the total is 299, or 1 67 per 1000 of population, the other provinces being thus accounted for: Manitoba, 565, or 2·21; New Brunswick, 1054, or 3·18; Nova Scotia, 1392, or 3·02; Ontario, 7511, or 3 44; Prince Edward Island, 357, or 3·45; and Quebec, 5245, or 3·18.

Cases of Gastric Ulcer occurring in the Royal Victoria Hospital, Montreal, during the past Eight Years.

Dr. E. P. L. Cantlie, externe in clinical medicine at the Royal Victoria Hospital, Montreal, has published in the April issue of the *Montreal Medical Journal* an analysis of the cases of gastric ulcer occurring in that institution during the past eight years. During that period of time there were in all admitted to the institution 20,596 cases, of which number 85 were cases of gastric ulcer, three being in males and 82 in females. More than one-half of these were native-born Canadians, more than one quarter were born in Great Britain, while the balance came from the United States and other places. The ages varied from 17 to 70 years, the average being 27½ years. There were eight patients under 20 years of age and ten over 40. The most frequent time of all was the third decade, 49 out of the 75 patients where the age was recorded being between 20 and 30 years. 34 patients were servants, 14 were housekeepers, and only two gave occupations definitely as cooks. Anæmia was an associated condition in 42 cases. In five of the cases there were no prior symptoms relating to the stomach. Of the surgical cases all but one were admitted after perforation had occurred. These numbered eight, with seven recoveries. Of the 83 cases of which records have been kept, 39 are recorded as cured, 34 as improved, one is noted as unimproved, and in six the result is unrecorded. Two patients died, one from perforation and general peritonitis and the other from hæmorrhage. In this last case multiple erosions were found post mortem.

Typhoid Fever in the Royal Victoria Hospital, Montreal, in 1902.

Dr. Colin K. Russil, senior resident physician at the Royal Victoria Hospital, Montreal, has compiled for the *Montreal Medical Journal* statistics relating to the cases of typhoid fever occurring in that institution for the year 1902. In all there were 90 cases treated, 58 males and 32 females. Of these 75 were treated to a conclusion, 15 being still under treatment at the time the report was published. The average age of all the patients was 23 years, the youngest being three and the oldest 63 years old. Arranged in decades they are as follows: under 10 years, six cases; from 10 to 20 years, 19; from 20 to 30 years, 36; from 30 to 40 years, 11; from 40 to 50 years, one; and from 50 to 60 years, two. The largest number of cases were admitted during the month of August, there being 17 admissions during that month. The average day of disease on admission was the ninth. The average number of days in the hospital was 38·5. The average duration of fever after admission was 31·5 days. The longest period of fever after admission was 42 days. The shortest period of fever while in hospital was seven days, of which there were two cases. *Diarrhœa* was present at the onset of the disease in 33·3 per cent. Constipation was present at the onset of the disease in 48 per cent. Vomiting was present at the onset in 32·2 per cent. An Epistaxis was present at the onset in 18·6 per cent. The earliest eruption was present in 81·2 per cent. of cases. The earliest appearance of the rash was on the fourth day and the latest on the twenty-ninth day. In two cases the rash appeared only during the relapse. The average duration of the rash was 15 days, the shortest being three days and the longest 27 days. The Widal test was tried in all cases. It was negative in six. The test was tried in 39 cases on discharge; it was present in 35, absent in three, and doubtful in one. In one case it appeared on the fifth day. In another it was not present until the twenty-fourth day of the disease. It was present on the average on the thirteenth day. In 21 cases it was present on admission. There were four fatal cases recorded as follows: typhoid fever with perforation, operation, death; typhoid fever, perforation, and death; typhoid fever, toxæmia, intestinal hæmorrhage, extreme toxæmia, and death; and typhoid fever with purpuric eruption, toxæmia, and death.

The Proposed Dominion Medical Council.

The Quebec Legislature has rejected by a large majority the motion to ratify the Canada Medical Act, 1902, commonly known as the Roddick Law. This Act was procured from the Dominion Parliament after persistent and patient effort on the part of Dr. Roddick, M.P., for many long years. It was passed at the last session of that parliament on the understanding that before it became operable it must be ratified by the legislatures of the different provinces. Quebec has refused to do this and as a consequence Dominion registration has received a set back, but it is hoped only for a time. During the past few months amendments to the Act of 1902 have been agitated for in the province of Quebec and the question of asking for these was brought before the Montreal Medical Society, with the result that a special committee was appointed which made a report on March 31st last in favour of certain amendments, which report is said to have been adopted. It would appear that the great difficulty on the part of the province of Quebec is the desire of one of the universities of the province to extend over the whole Dominion its prerogatives which at present are confined to that province. In other words, the majority in Quebec would give the holder of a Quebec university degree in medicine the right without further examination to practise anywhere in the Dominion.' Their meaning is quite clear without quoting in full the proposed amendments. This does not suit the taste of the University of Toronto in the province of Ontario, and its medical faculty has prepared a memorandum calling attention to these proposed amendments to the Canada Medical Act which, if allowed to proceed further without opposition, would result in prejudicing the course of medical education in the province of Ontario. That the whole question will have to be thrashed out again before the provincial and national medical societies seems certain. All the other provinces have taken the necessary steps to have the Act ratified on the initiation of their respective medical councils, each of which has approved of such legislation. The College of Physicians and Surgeons of Quebec refused to recommend any ratification legislation to the Quebec House, hence the rejection of an independent motion.

Toronto, May 16th.

GLASGOW UNIVERSITY CLUB. — Mr. George Wyndham, M.P., Lord Rector of the Glasgow University, took the chair at the dinner organised by the Glasgow University Club (London) and held at the Trocadéro Restaurant, London, on May 29th. Among those present were the Earl of Lytton, Lord Shand, Professor A. C Bradley, Professor John Adams, Professor W. P. Ker, Professor J. M. Thomson, Professor J. H. Byles, Dr. Guthrie Rankin, Dr. H. Carmichael, Lieutenant-Colonel W. Babtie, V.C., C.M.G., R.A.M.C., Mr. Edmund Owen, and Dr. C. O. Hawthorne In giving the toast of "The University and the Club" the chairman said that he had received letters of apology for non-attendance at the dinner from Lord Kelvin, Lord Lister, Sir W. Gairdner, Sir W. Ramsay, and Professor Dewar. Continuing, the chairman said that it had been asked why the Glasgow University Club met in London; the answer was that London was the most appropriate place for such a dinner. That city had become the heart of a world-wide empire, of which no portion yielded so many servants to the State as the Scottish universities. Professor Bradley proposed "The Houses of Parliament," which was responded to by Lord Lytton and Mr. W. J. Galloway, M.P. In replying to the toast of "The Guests," proposed by Mr. J. M. Dodds, Mr. Edmund Owen said that Scotland, and Glasgow in particular, had supplied a great number of men of science. He thought that that was due to the splendid education in Scotland. The toast was also replied to by Mr. O. M. Drew, President of the Glasgow University Union. The toast of "The Chairman" was proposed by Mr. D. A. Dick, President of the Students' Representative Council, University of Glasgow, and after the chairman had replied the proceedings terminated.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

WEDNESDAY, MAY 27TH.

The Council continued its proceedings to-day, Sir WILLIAM TURNER being in the chair.

After the confirmation of the minutes of yesterday's meeting,

Mr. BROWN said he wished the Council to go into *camerâ* at once. He wanted to call attention to a minute of the Executive Committee in regard to a matter affecting a practitioner about whom he had received a letter that morning.

The PRESIDENT: That is not the business before us to-day.

Mr. BROWN agreed that it was not but he wished also when *in camerâ* to put a question in relation to the business on the programme for that afternoon.

The PRESIDENT: You cannot alter the Executive Committe's minutes in Council, but I understand that you want to discuss a point about the first case on to-day's business programme before the parties to that case are called? Is the Council satisfied that it should be so?

No assent was given.

Mr. BROWN: Then I move formally that the Council go into *camerâ* before the parties in the first case are called.

Dr. BRUCE seconded the motion, which on a vote was rejected by 13 to 7.

The PRESIDENT asked that the parties to the case referred to should be called.

Dr. WILLIAM GEORGE NIALL, registered as of Kinkora, Dabdune-crescent, Guildford, M.D., Mast. Surg. 1886, R. Univ. Irel., who had been summoned to answer a charge formulated by the Council's solicitor, answered the call, accompanied by his counsel, Mr. BODKIN, who in reply to a question explained that he was appearing with Mr. Symmons, instructed by Mr. Kempson, solicitor.

Dr. BATEMAN also answered as representing the Medical Defence Union (the complainants), and replying to the PRESIDENT stated that he had witnesses in attendance, but he ventured to say that the case was one which he thought should be heard *in camerâ*.

The PRESIDENT: What do you say, Mr. Bodkin?

Mr. BODKIN: I have nothing to say. I cannot oppose it or assent to it because of the particular view I take of the case.

The PRESIDENT: You are neutral.

Mr. BODKIN: Entirely.

The PRESIDENT then put the question that the Council go into *camerâ* on the case.

There was no dissent expressed and strangers were accordingly asked to withdraw. They were not readmitted during the sitting, which was prolonged beyond the ordinary time of adjournment.

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Thursday. The witnesses for the defence in attendance numbered about a dozen.

THURSDAY, MAY 28TH.

The Council resumed its sittings to-day, Sir WILLIAM TURNER, the President, being in the chair.

The Case of Dr. William George Niall.

The Council at once went again into *camerâ* on this case, but after a further consideration of it for an hour and a half decided to adjourn it till the November session.

The Case of Mr. D. B. Bradlaw.

The Council proceeded with the case of David Barnett Bradlaw, registered as of 4, Harrington-street, Dublin, Lic., Lic. Midwif. 1899, R. Coll. *Phys.* Irel., Lic., Lic. Midwif. 1899, R. Coll. Surg. Irel., who had been summoned to appear before the Council to answer the following charge, as formulated by the Council's *solicitor*:—

> That you, being a registered medical practitioner, have associated yourself in dental practice with your brother, Henry Jacob Bradlaw, a dental practitioner, registered as residing at No. 4, Harrington-street, Dublin, and have carried on a dental practice at No. 146, Inverness terrace, Bayswater, W., in your said brother's name, and

have personated him; and further, that the dental practice carried on at No. 146, Inverness-terrace, as aforesaid is extensively advertised by pamphlets and in newspapers and otherwise.

Mr. Bradlaw appeared to answer the charge, accompanied by Mr. A. Houston and Mr. L. H. Rosenthal, his counsel, instructed by Mr. Emanuel, his solicitor. Mr. R. W. Turner, instructed by Messrs. Bowman and Curtis-Hayward, attended in support of the case for the complainants, the British Dental Association. The Council's solicitor read the notice to attend.

Mr. TURNER explained that this case arose out of proceedings taken in the Marylebone police-court in March last. There were two brass plates on the door at 146, Inverness-terrace, one giving the name of the accused and the other that of his brother, the dental practitioner. Mr. D. B. Bradlaw, in the defence he had put in, stated that he had sublet part of his house and attended dental patients when his brother was absent in Ireland, but he did not tell them that he was either the medical or dental practitioner. As regards the advertising he had absolutely nothing to do with it. He was quite prepared to make his brother give up advertising or to take another address. He had not associated himself in trade with his brother and he had not done anything against the honour of his profession. He asked the Council to overlook his error of judgment.

The other statutory declarations were held as read.

Mr. HOUSTON did not dispute the facts and proceeded to address the Council. He said that Mr. Bradlaw was a man of very good reputation and had testimonials of the strongest from a number of the most eminent men in his own country. These testimonials showed that Mr. Bradlaw was a practised dentist and if they convicted him of the charge, it would be on the word of what he might call an inquiry agent and would disregard the testimonials from these eminent men who knew him. With respect to the advertising, the advertisements were perfectly harmless; and that the two practices were carried on in the same house could not detract anything from the character of the medical man from whose house the advertisements were issued. He denied personating his brother or associating with him in his business, but he was never asked in his brother's absence whether he was the brother or the other. He expressed his regret for anything done. He had stopped the advertising and also the dental practice. The brother, if he set up another practice, was not to be permitted to set it up at Inverness-terrace.

This closed the case and the Council deliberated in private. On the readmission of strangers,

The PRESIDENT, addressing Mr. Bradlaw, said: The Council has deliberated on your case and the conclusion it has come to is—that the facts alleged against you in the notice of inquiry have been proved to its satisfaction, but it is willing to give you an opportunity of satisfying it as to your conduct in the future, and it will adjourn further consideration till next session. You will then have to appear before the Council and satisfy it that your conduct in the interval has been quite satisfactory.

Mr. BRADLAW: Thank you.

The Case of Mr. E. A. Cloete Smith.

Consideration was next given to the case of Edward Arnold Cloete Smith, registered as of 1, Westbourne-street, W., Mem. R. Coll. Surg. Eng. 1884, Lic. R. Coll. Phys. Lond. 1884, who had been summoned to appear before the Council to answer the following charge, as formulated by the Council's solicitor:—

That you have systematically sought to attract practice and patients by means of circulars, circular letters, and inspired articles in the lay press, the circulars and circular letters printing your name, and in some cases your address, and publishing your name as surgeon of an institution which publicly advertises treatment of cancer by electricity, called the Free Hospital for Medical Treatment of Cancer by Electricity.

Mr. Cloete Smith appeared to answer the charge accompanied by Dr. Hugh Woods, Secretary of the London and Counties Medical Protection Society, of which he was a member, and Mr. J. W. H. Thompson, a solicitor, who attended as a witness.

Dr. BATEMAN attended on behalf of the Medical Defence Union, the complainants, and in opening the case, explained that the Free Hospital was at Notting Hill Gate and Mr. Cloete Smith was the physician in attendance. If Mr. Cloete Smith did not circulate the prints himself they were circulated for him, and he ventured to submit that the accused had been guilty of advertising for the purpose of procuring patients.

Mr. T. W. TYRRELL, clerk to Messrs. Hempson, went into the witness-box and confirmed a statutory declaration of his which was held as read.

In answer to Mr. Thompson he said that at the hospital he asked whether they accepted donations, and was told that they did. Asked if he saw anything in the hospital that was not in other hospitals he replied, certainly, for he saw two luxuriously furnished waiting rooms.

This closed the case for the complainants.

Mr. CLOETE SMITH asked the Council to allow Dr. Woods to conduct his case.

After some conversation Dr. Woods received permission to put questions.

Mr. J. W. H. THOMPSON, the solicitor accompanying Mr. Cloete Smith, in answer to Dr. WOODS, said that he and his wife had some money, and his wife wished to take some of it in research of treatment of cancer. The result of that was that they founded the hospital and asked Mr. Cloete Smith to act as physician of it. Mr. Cloete Smith was an old friend of his, and witness knew that for years he had been doing work in electricity. Witness was entirely responsible for the money. He took the house for two years as he was given to understand that nothing very satisfactory could be done in less than that time. It was a perfectly charitable institution: there was no element of profit in it. He never meant to make money from it and he asked no one for money. He had agreed to pay Mr. Cloete Smith 50 guineas, but that gentleman did not wish to take anything. Witness knew that probably he wanted a horse and he offered the money. Neither Mr. Cloete Smith nor anyone could make any profit out of the hospital, and witness was unaware of anything in the nature of advertising the hospital for Mr. Cloete Smith's advantage. With reference to a circular which was being issued by Mrs. Helen Black, a journalist, on one being handed to him he went to Mr. Cloete Smith's house and asked for an explanation. Mr. Cloete Smith assured him that he was not responsible for Mrs. Black's letters and that he had in no way inspired them. His reason for going to Mr. Cloete Smith was that when the hospital was founded no statements issued by witness appeared in the lay press. He considered the explanation satisfactory. On the Tuesda following Easter-day a pressman called on him. He said that a statement in regard to the treatment of cancer by electricity was to appear in his paper next day and he asked witness if he would give him some kind of statement in regard to his hospital. Witness told him that no statements in regard to medical matters should appear in the lay press and he refused to give information. He took exception to the way in which Mr. Tyrrell's declaration had been made and the evidence obtained. When the hospital was first opened a circular letter was sent to every hospital in London as it was desirable to let the officers of these institutions know of the existence of a new hospital. Anybody, of course, could have gone to the hospital at any time. The Medical Defence Union had let the matter go on from the beginning of April until now. He had received no intimation that it was considered objectionable. He heard of it only the other day and as it appeared to be rather peculiar he took exception to it.

Dr. BATEMAN: Mr. Thompson's position in connexion with this hospital is absolutely *bonâ-fide* and unassailable and I have no questions to ask him.

Replying to the President, witness said that he had drawn up the original letter relating to the founding of the hospital; he had done it for his wife.

In answer to Sir VICTOR HORSLEY, witness said that the hospital premises had, he believed, always been used as a private house. He was paying £160 per annum for the two years for it. He believed that everything had been done for the people who might come for treatment and the instruments and electricity appliances were second to none in London.

By Mr. BROWN: He found the entire expenses. As to one room being furnished better than another no distinction was made between people who came for treatment.

Mr. BROWN: Were there any means taken to exclude those who might be excluded.

The Witness: My wife personally sees the women applicants for admission and decides whether they are fit to be patients. The male applicants are looked after by my wife's secretary, who is an old schoolmaster, and he sees them all.

This having concluded Mr. Thompson's examination the further hearing was put off till Friday.

The English Conjoint Board's Report.

Sir VICTOR HORSLEY asked how it was that the report of the chairman of the Examination Committee on the question of the English Conjoint Board's primary examinations was not yet forthcoming. They had been promised that it would be in their hands on the morning of that day.

The PRESIDENT: No doubt you will get it to-morrow morning.

Sir VICTOR HORSLEY: But I am entitled to an answer to my question.

Mr. BRYANT: *I think you have got a satisfactory answer.* The report will be in the hands of the Council to-morrow.

Sir VICTOR HORSLEY: It is quite hopeless to expect to get a straight answer to a straight question from the chairman of the Examination Committee.

The Council adjourned.

FRIDAY, MAY 29TH.

The Council resumed to-day, Sir WILLIAM TURNER being in the chair.

The Case of Mr. Cloete Smith.

Proceedings in this case were continued, the parties appearing as before.

Mrs. HELEN BLACK, journalist, in answer to Dr. Woods, said that for years she had taken a great interest in the medical work connected with hospitals and had paid special attention to the recent discussions on the treatment of cancer. Some little time ago, about the end of February, she had written an article on the advantages of electricity in the treatment of cancer. That was done by her as a journalist. It was her own work and her own doing. It was published in the *Pall Mall Gazette*, but Mr. Cloete Smith had certainly not consulted with her before the article was published. She had had no interview with him on the subject and he knew nothing whatever about it. With reference to the so-called private letters or circulars sent out by her respecting the hospital in question, these had been sent out in reply to requests for information, sent out as private letters to her friends. She had got prints in order to avoid the trouble of writing. She had not mentioned *the circular she was about to send out before she got copies* printed. She had sent Mr. Cloete Smith a copy and on receiving it he had asked her to stop the issuing of them. She had no idea whatever that they were, or would be regarded as, advertisements. They were simply private answers wished by friends.

Cross-examined by Dr. BATEMAN: She had had several conversations—not what might be called interviews—with Mr. Cloete Smith. She had been told that his information and ability might be of advantage to her in connexion with a hospital at Southampton and she wanted to find out, but he had never asked her to advertise the Free Cancer Hospital. He had never asked her to bring before the public any facts about it and she had published the article in the *Pall Mall Gazette* without his knowledge or consent. She had 2000 copies of the circular printed but only about 350 had gone out.

In answer to questions by members of the Council she emphatically denied that the newspaper article in question was an inspired production. In any conversation she had with Mr. Cloete Smith no suggestion was made that the facts might be brought before the public that a small hospital was to be opened for the treatment of cancer. The conversation was general.

Mr. CLOETE SMITH then gave evidence. In examination by Dr. WOODS he said that he had *no knowledge* whatever of the printed circular which Mrs. Black issued before it was sent out by her and as soon as he heard of it he telegraphed to the lady to stop the issue. He had absolutely no knowledge whatever of, and was not associated in any way with, the article Mrs. Black had published in the *Pall Mall Gazette*. It was days after it appeared before he saw it. He had been a serious student of electricity for a considerable number of years and an article of the nature of that in question would not, in his opinion, redound to anyone's credit. He admitted having had conversations with Mrs. Black, but in these he had no idea that she was going to publish anything he had said. Asked if he was deriving any profit from his connexion with the hospital, he replied that he was working at a dead loss.

Cross-examined by Dr. BATEMAN: Is there anything done in the way of electrical treatment in this small hospital that is not done at every London hospital?—I fancy that the method is a little different. It may be more prolonged, there may be certain details in the treatment and in the instruments, and in these details there may be difference.

In answer to the PRESIDENT, witness said that the institution was not to be regarded as a home and it was not an in-patient hospital at all. It was to offer the advantage of special treatment.

After some further questions the evidence was concluded and Mr. CLOETE SMITH addressed the Council in defence of himself. The Council deliberated in private. On re-admission of the parties

The PRESIDENT, addressing Mr. Cloete Smith, said: The Council has decided that the facts alleged against you in the notice of inquiry have not been proved to its satisfaction.

University Representation on the Council.

The Council resumed consideration of the following motion by Mr. JACKSON, adjourned from Saturday last:—

> That the C[illegible] Council that in the event of the [illegible] ito two or more separate univer-[illegible] continue to represent the whole collectively.

[illegible] He thought that it would b[illegible] the Council to give any ac[illegible]ould have the effect of raising against them the opinion of the people of Lancashire and Yorkshire, who were subscribing large sums of money for the purposes of higher education. He held that the younger colleges of Manchester, Liverpool, and Leeds would be all the better for being represented on the Council by themselves and if they were to propose to give to each of these colleges only one-third of a member, it would, in the opinion of the people of these localities, mean that these institutions were to be put on a lower level than the universities elsewhere, some of which were not as large as the Owens College, Manchester. The new question of having an extra chair or two in that room was neither here nor there. Suppose the Council were to pass this motion and to send it up to the Privy Council they might be told that they were exceeding their duty. Did they suppose that any Government would encounter the opposition of such an influential body of opinion as the people of Lancashire and Yorkshire? He hoped that the Council would decide against the motion by a large majority.

Sir C. NIXON said that it was not the business of the Council when a new university had been created by charter to volunteer its advice to the Government that the privileges of that university should be withheld from it. He sincerely hoped that the Council by an overwhelming majority would decide against the motion.

Sir VICTOR HORSLEY appealed to Mr. Jackson to withdraw his motion. He could not vote on the question one way or the other until he had seen the terms of the charter of the Victoria University. It might turn out that the university were not claiming representation and he should like to see the charter first.

Dr. BENNETT moved the "previous question."

Dr. ATTHILL seconded this amendment.

On a show of hands the "previous question" was carried and the motion accordingly dropped.

Examinations of the Apothecaries' Hall, Dublin.

The Council resumed consideration of the following motion by Dr. MACALISTER:—

> [illegible]

Mr. TICHBORNE now produced certain documents in connexion with the case. He said he did not think that there had been any great harm done, because the gentleman in question passed almost with honours; he got very high marks in two of the subjects and passed very well in the third.

The motion was agreed to.

A Special Session in July.

The next business on the agenda was "to receive a report from the Education Committee" and the following notice of motion by Mr. BRYANT:—

> That the consideration by the Council of the Inspectors' and visitors' reports, and of the report on these by the Examination Committee, be postponed until July 28th, when a special meeting of Council shall be held for the purpose of taking them into consideration.

The PRESIDENT said that they had got rid of their penal business, which had cost them a great deal of money, and he did not know that the result was altogether worth the money. But still they had gone through the most laborious and to many of them the most disagreeable task. Now they came to that part of their business which constituted in his judgment the most important part—namely, the question as to the education which a person was to receive and the examination through which he was to pass before he was admitted to the Medical Register. There was before the Council a large mass of important material to consider and first on the programme was "to receive a report from the Education Committee." Then came a motion by Mr. Bryant to postpone the consideration of the reports by the Examination Committee on the inspectors' and visitors' reports. Next followed reports by the Examination Committee on the inspection of final examinations and after that came reports by the same committee on the inspection of certain primary examinations It was obvious from the notice of motion by Mr. Bryant that the question was going to be raised whether these reports of the Examination Committee should be considered at this session or postponed till a later date. He understood that the report of the Education Committee was intimately linked with the reports of the Examination Committee on the inspection of primary examinations, and the question arose in his mind if there was to be a postponement of the reports of the Examination Committee, should there not also be a postponement of the report of the Education Committee? But he would point out to members of the Council that if this postponement did take place it meant a considerable expense.

Mr. TOMES: Can you tell us what the probable expense will be?

The PRESIDENT: It depends on the number of days the Council sits. It is something between £150 and £200 a day; that you may take as a fair average.

Mr. ALLEN (Registrar): £650 for a session of two days and £175 for each following day.

The PRESIDENT: What a very expensive body the Council is!

Mr. BROWN suggested that the inspectors' and visitors' reports should be received and entered on the minutes.

The PRESIDENT said he would agree to that on one condition, that the motion to receive the reports was accepted without debate.

Dr. MCVAIL objected to the reports being entered on the minutes until the Council was going to discuss them. It would be quite unfair to the representatives of the bodies concerned who should have an opportunity of making a reply.

Mr. BRYANT then formally moved the proposal standing in his name:—

> That the consideration by the Council of the inspectors' and visitors' reports, and of the reports on these by the Examination Committee, be postponed until July 28th, when a special meeting of Council shall be held for the purpose of taking them into consideration.

He said he merely brought forward the motion as the mouthpiece of the committee but his own opinion was the other way.

Dr. MCVAIL, in seconding the motion, said that it was the unanimous finding of the committee with the exception of Mr. Bryant who expressed an opinion neither way.

Sir WILLIAM THOMSON said he was not in favour of the motion and he was a member of the Examination Committee.

Dr. MCVAIL said the Examination Committee had sat that week 12½ hours and it was, perhaps, the most arduous work the members of the committee had ever been engaged in. Very full consideration was given by the committee to every one of the reports and the serious question which the members of the committee had to consider was whether they should agree or disagree with the opinions expressed in these reports. What the committee felt was this: could the members of the Council do justice to these reports without having them in their hands for consideration for two or three weeks? The Council had taken four and a half days for the penal work. Were they to grudge the money necessary for carrying on what was really the most important business of the Council? If it was right that they should postpone the reports the question of expense should not stand in the way. He understood there were certain important members of the Council, including the President, who could not be there after Saturday and he was sure they would all agree with him that to consider these important reports without the President would be wrong.

Sir WILLIAM THOMSON opposed the motion. It would be very inconvenient to many members of the Council to return to London in July for a special session. The matters dealt with in the reports of the Examination and Education Committees were very important to the colleges and conjoint bodies concerned and it was an exceedingly unpleasant thing for these bodies to have the reports talked about and the effect of them leaking out. He thought it would be much better that the Council should come face to face with these bodies without further delay. They had been dangling over the business for five or six years and at last when they had got to a definite point they were met by a motion for postponement until next July or November. He submitted that as the Council was now in session it would be far better to go on for two or three days longer rather than face again the great inconvenience of a special session in two months' time.

Dr. WINDLE said he should have preferred to go on with the work but the President had intimated that it was impossible for him to be present after Saturday. This was a matter of such great importance that the Council ought to have the President in the chair when it was being discussed. That was his sole objection to proceeding with the business this session, but he hoped the Council would meet at the earliest possible date. This matter had been hanging in the air for nearly 12 months. All sorts of remarks had been made about it in the medical journals and it was not fair that that sort of thing should be carried on for another six months.

Sir C. NIXON and Dr. NORMAN MOORE supported the motion for postponement.

Dr. PYE-SMITH protested against the proposal to have a special meeting for the consideration of the reports. He should have thought that the state of their finances was quite sufficient to show how unjustifiable was the motion. The expense ought to be seriously considered. He held that the Council had no right to spend what, after all, was other people's money. They had spent at the present meeting an enormous sum of money with small fruits. There was nothing very urgent in the reports of the Examination Committee and they could quite well be postponed for a little longer. A special session in July would probably end in a fiasco, as was the case on a former occasion when a special meeting of the Council was held. He moved as an amendment that the reports be postponed till the next ordinary session in November.

Dr. LITTLE seconded this amendment.

Dr. MCVAIL hoped the Council would not agree to the amendment. The representatives of the bodies concerned should have the right of discussing the reports and the observations of the committee upon them at the earliest moment, if they desired it. It was entirely in consideration of their position that he seconded Mr. Bryant's motion for a postponement to an early date. He totally differed from Dr. Pye-Smith in describing a previous special meeting of the Council as a "fiasco" and said that that style of argument was not likely to insure that members of the committees would devote such earnest and close attention to the matters that came before them as had hitherto been the case.

Dr. BRUCE said that to have a special meeting within three months of the ordinary session in November was, on the face of it, acting the part of spendthrifts. He believed that no harm would follow from the postponement till November. The difficulty of settling any date for a special meeting would be very great. Whatever date was fixed it might not be convenient for some members.

Dr. FINLAY suggested that Mr. Bryant should withdraw his motion.

Sir VICTOR HORSLEY hoped that the Council would not be guided by the question of expense in deciding whether there should be a special meeting. They would have a full programme in November and to postpone all this mass of material till then would greatly overload the next ordinary session. The mere question of travelling expenses was a small item compared with the important work which the Council had got to do. He therefore hoped the Council would agree to have a meeting some time in July.

Dr. PAYNE said that he should not be sorry if the matter was delayed till November. The body which he represented was not at all anxious to bring the matter to a crisis.

Mr. BROWN suggested that the Council should adjourn that evening and meet again on June 3rd or 4th.

On a show of hands Dr. Pye-Smith's amendment to postpone consideration of the reports till the ordinary session in November was rejected by 13 votes to 11.

Mr. BRYANT informed the Council that the reports of the Examination Committee on the inspection of the final examinations of the Universities of Cambridge, Durham, and Victoria were ready and could be dealt with by the Council before the adjournment.

On the motion of Dr. MACALISTER, Mr. Bryant's motion was then amended by omitting the date "July 28th" and adding the words "other than the reports of the Cambridge, Durham, and Victoria Universities."

A good deal of discussion ensued as to the most convenient date for the special session. Various dates in July were mentioned.

Dr. NORMAN MOORE proposed and Dr. BRUCE seconded that the next ordinary session should be held on Oct. 26th, but this did not find much favour among the members and it was stoutly opposed by Dr. MCVAIL who denounced the proposal as a "manœuvre" on the part of those who objected to any special meeting.

It was ultimately decided that the special meeting should be held on July 15th and Mr. Bryant's motion was carried with the insertion of this date.

It was further resolved to postpone the consideration of the report of the Education Committee to the same special meeting.

Final Examinations.

Dr. MACALISTER thought that though consideration was postponed it would be advisable at once to place on the minutes the reports from the Examination Committee on the inspection of the final examination of the Universities of Durham, Victoria, and Cambridge and also those respecting the Universities of London and Oxford and the Conjoint Board in England.

Sir VICTOR HORSLEY supported this view and the Council agreed.

Extracts from these reports follow :—

CAMBRIDGE UNIVERSITY.

There is no examination in forensic medicine, nor examiners. There was only one question set in hygiene and there was no oral or practical examination in that subject, or any special examiner. The examination in surgery was pronounced by the inspector to be excellent The surgical examination was upon the whole a very thorough one and possessed some features which are well worthy of close consideration. The examination in midwifery and diseases of women is described by

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seem to be fault-finding.

OXFORD UNIVERSITY.

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UNIVERSITY OF DURHAM.

In the opinion of the visitor and inspector the examinations in medicine, surgery, and midwifery of the University of Durham, held in September, 1902, are "sufficient"

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UNIVERSITY OF LONDON.

The visitor and inspector in their careful report on the examination for the degree of Bachelor of Medicine of the University of London came to the conclusion "that the examination in medicine and in midwifery was sufficient," but that the "examination in surgery was not such as would secure the standard of efficiency in that subject *that is required by the General Medical Council.*"

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VICTORIA UNIVERSITY.

The Victoria University when the inspection was made was still composed of three colleges, as it was in 1893 when last visited and inspected—Owens College of Manchester, University College of Liverpool, and Yorkshire College of Leeds. The final examinations held in July, 1902, are at present practically the same as those which were in force in 1893 and candidates may now either present themselves in all six subjects of examination on the same occasion or may pass the examination in two parts. The written portion of the examination occupied four days, the clinical, practical, and oral nine

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examination was pronounced to be excellent. The examination in practical surgery was comprehensive and thorough.

The examination in obstetrics and diseases of women, in morbid anatomy, in pharmacology and therap

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CONJOINT BOARD IN ENGLAND.

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chemistry, and organic chemistry and make it compulsory to answer two questions in each section. The Examination Committee approves of this recommendation.

The visitors state that the candidates were so badly prepared that a higher standard than the one used would have rejected the majority of them, but as "the minimum 50 per cent. marks required on the average of the written and practical is higher than is usual in a

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years of medical study from the date of the preliminary examination in arts. The purpose of the preliminary examination now under review "is the testing of such knowledge of chemistry, physics, and biology as a student may acquire in proper laboratories and under sound teachers in the first year of his medical studies." Under the

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> visitors that as regards biology, "the examination is not one capable of eliciting whether a candidate has been properly taught or has been crammed"; it also agrees that as regards the curriculum of the Colleges "the standard exacted is apparently as high as can be obtained from candidates so imperfectly trained." Concerning chemistry and physics the committee agrees with the visitors that "the standard is a low one"; and that "the main portion of the practical examination is empirical and not scientific, and is no test either of sound principles or of practical efficiency."

Returns from Teaching Institutions.

On the motion of Sir Victor Horsley, seconded by Sir John Batty Tuke, there was also formally received and entered on the minutes a report by the Education Committee on the returns supplied by the Examining Board in England pursuant to a request made by the General Medical Council in a resolution passed on Feb. 26th, 1902, showing the answers given by the teaching institutions recognised by the Royal Colleges of Physicians and Surgeons in London, but not approved by the General Medical Council, regarding the courses of study in chemistry, physics, and biology to be gone through by candidates for the qualifications L.R.C.P. Lond. and M.R.C.S. Eng., with remarks by the Education Committee. These remarks were summarised in the following way:—

> From the statistics presented to and analysed by the committee two important facts emerge which the committee think worthy of special emphasis:—
>
> I. The Royal Colleges of England do not demand, as an essential for admission to their professional examination in chemistry, physics, and biology, that any certified course of instruction in these subjects should be taken subsequent to the preliminary examination in general knowledge. It is understood that at some period the student has studied these subjects in a recognised school, but he may present himself for examination in them immediately after passing the preliminary examination, and the licensing body relies, for evidence of his knowledge, solely upon the results of its own examination.
>
> II. In cases where the whole time spent upon these three subjects is antecedent to the date of the preliminary examination in general knowledge the licensing body does not permit the prescribed five years' curriculum in medical study to be curtailed thereby. All students are required subsequent to the preliminary examination to devote five years to medical study. But on the other hand a student whose course of study in chemistry, physics, and biology is taken out subsequent to the date of his preliminary examination is permitted to count, as part of the necessary five years, any period from three months to one year spent in one of the recognised schools, provided that during the period specified—three, six, or nine months, as the case may be—he engages in study in one, two, or all of, the subjects mentioned. In the majority of the recognised institutions biology is not taught and as a consequence the student who spends a portion of his first year of medical study in one of these schools in most instances confines his professional work to chemistry and physics and very frequently takes these subjects in conjunction with others which form part of the ordinary school curriculum. In most of the schools the course of instruction followed in chemistry and physics is less than 15 hours a week; in many it is very much less. And it is evident from the statistics presented that in some of the cases it is actually possible for six months of medical study to be constituted by a course of instruction in chemistry and physics, limited so far as these subjects are concerned to four or five hours a week and taken out at an ordinary grammar school during school hours, or at a technical institute, it may be in its evening classes.
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> *Note by Dr. Norman Moore on the returns:*—It should be observed that the principle generally adopted in the recognition of institutions by the Conjoint Board has been that where the laboratories and appliances are satisfactory and the teachers efficient, the syllabus and examination of the Board will, in chemistry, physics, and biology, be sufficient to regulate the course of study.

The Pharmacopœia.

At the request of Dr. MacAlister, who said that he had nothing to add, the following report was received and entered on the minutes:—

> The Pharmacopœia Committee beg leave to report that up to the present date 33,880 copies of the British Pharmacopœia, 1898, and 541 copies of the Indian and Colonial Addendum, 1900, have been disposed of.
>
> As the issue of 1500 copies of the Pharmacopœia ordered by the President in July of last year was nearly exhausted by the end of March it became necessary to direct the printers to prepare a further supply. On inquiry it appeared that an appreciable saving would be effected if a larger issue than 1500 were printed and the President accordingly, after consultation with the chairman of the committee, gave orders for an issue of 3000 copies. This supply should, at the present rate of sale, suffice for two years or more. The committee recommend that the action taken in the matter be approved by the Council.
>
> The committee have received an interim report on the Pharmacopœial tests for arsenium from Professor W. R. Dunstan, F.R.S., who has undertaken to investigate for the committee certain important questions bearing on this subject. The investigations are being made under Professor Dunstan's direction in the laboratories of the Imperial Institute. As the inquiry involves a large amount of laborious work the committee propose, with the approval of the Council, to make a grant towards the necessary expense involved.
>
> The first instalment of a digest of criticisms and researches bearing on the revision of the Pharmacopœia, prepared for the committee by Mr. William Chattaway of the Society of Apothecaries, has just been received and the remainder will be ready in a short time. This digest will be of great service in suggesting the directions in which further investigation may be necessary before the preparation of the next Pharmacopœia is undertaken.
>
> Notice has been received of the resignation of Mr. Charles Ekin, who, with Dr. W. Inglis Clark, has since 1899 represented the Pharmaceutical Society of Great Britain in the conference with members of the committee which was sanctioned by the Council on Nov. 30th, 1898. The committee desire to record their thanks to Mr. Ekin for his services in this connexion.
>
> Gifts of books and pamphlets for the library have been received from Professor H. C. Wood, Dr. Payne, Dr. Power, and the chairman.

Dr. MacAlister, in answer to Mr. Brown, said that in respect to Dr. Inglis Clark the matter rested with the Pharmaceutical Society.

Mr. Brown: I should like to propose that it is not necessary that the vacancy should be filled. I have reasons for that.

Dr. MacAlister: I think you should leave the Pharmaceutical Society to mind its own business.

Application for Registration.

A report was submitted from the English Branch Council recommending that an application for registration by Mr. William Bennett Rule, Mem. R. Coll. Surg. Eng., 1866, Lic. R. Coll. Phys. Edin., 1867, a medical practitioner entitled to be registered under the Medical Act (1858), but who neglected to effect such registration until after the "appointed day" (June 30th, 1887), under the Medical Act (1886) should be granted.

On the motion of Dr. MacAlister, seconded by Mr. Bryant, the recommendation was adopted and the Registrar was directed to place Mr. Rule's name upon the Medical Register.

Committees of Council.

Committees as follows were appointed:—

Pharmacopœia Committee.—Dr. Norman Moore, Sir George Philipson, Dr. Payne, Dr. MacAlister, Sir John Tuke, Dr. McVail, Dr. Atthill, and Mr. Tichborne.

Finance Committee.—Dr. Pye-Smith, Mr. Bryant, Dr. Heron Watson, Dr. Bennett, and Mr. Tomes.

Dental Committee.—The President (Chairman), Mr. Bryant, Dr. Heron Watson, Mr. Tomes, and Sir Charles Ball.

Dental Education and Examination Committee.—Mr. Bryant, Mr. Brown, Mr. Tomes, Dr. Finlay, Sir Charles Ball, Dr. Lindsay Steven, and Dr. Bennett.

Students' Registration Committee.—Sir Hugh Beevor, Dr. MacAlister, Sir John Tuke, Dr. Mackay, Dr. Bennett, and Sir William Thomson.

Examination Committee.—Nominated by the English Branch Council: Mr. Bryant, Mr. Young, and Dr. Payne; by the Scottish Branch Council: Dr. Heron Watson, Dr. McVail, and Dr. Finlay; and by the Irish Branch Council: Sir Charles Ball, Dr. Little, and Sir William Thomson.

Education Committee.—Nominated by the English Branch Council: Dr. Norman Moore, Dr. MacAlister, and Dr. Windle; by the Scottish Branch Council: Sir John Tuke, Dr. Mackay, and Dr. McCall Anderson; and by the Irish Branch Council: Sir C. Nixon, Dr. Bennett, and Sir William Thomson.

Public Health Committee.—Nominated by the English Branch Council: Mr. Power, Mr. Jackson, and Sir G. Philipson; by the Scottish Branch Council: Dr. Bruce, Dr. McVail, and Dr. Lindsay Steven; and by the Irish Branch Council: Sir Charles Ball, Mr. Tichborne, and Dr. Bennett.

Public Health Committee.

On the motion of Dr. Bruce, seconded by Sir Charles Ball, a report from the Public Health Committee, from which the following are extracts, was received and entered on the minutes:—

> 1. The committee considered a communication from the Director-General of the Army Medical Department giving particulars of the proposed military sanitary districts, with their approximate populations. After due consideration, the committee agreed to recommend the Council to recognise on the present occasion the following districts, viz.:—Aldershot, Salisbury Plain, Southern and Western Districts, Dublin and Cork Districts; [illegible], [illegible] and Eastern Districts; North-Eastern and North-Western Districts, Scottish District, and Gibraltar, as meeting the requirements of the Council in accordance with Rule 3.
>
> 2. The committee had submitted to them a letter dated 16th May, 1903, from the Clerk of the Metropolitan Asylums Board, inclosing a resolution of that body in regard to the attendance at fever hospitals of candidates for diplomas in public health in accordance with Rule 4. The committee consider that this scheme meets in the fullest manner the rules and requirements of the Council for diplomas in public health. The committee suggest that the Council should express gratification that the Metropolitan [illegible] Board has seen its way to afford to students preparing for [illegible] such ample opportunities for complying with [illegible].

It was agreed to adopt Part 1 and that the military districts there recommended be the recognised military sanitary districts.

In moving the adoption of Part 2, Dr. BRUCE said that the Clerk to the Metropolitan Asylums Board was very anxious to meet the wishes of the Council in this matter. He had given every opportunity to secure inspection of diseases and if the Council approved of this report he thought they should express their thanks to the Metropolitan Asylums Board for allowing such opportunities as it was giving for the study of sanitary science.

Dr. NORMAN MOORE seconded the proposal which was agreed to.

The PRESIDENT: We shall see that a letter is duly sent to the Board.

The Council adjourned.

WE have received a letter from Mr. Henry Varley complaining of our publication of the reference made at the General Medical Council to certain pamphlets written by him and addressed to young men. We made no comment on the proceedings, but, although we do not impute improper motives to Mr. Varley, we must say, having read his pamphlets, that they are not fitting works to be retailed to anyone who likes to buy them for 6*d*. or 3*d*.—ED. L.

Medical News.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the first professional examination for the Fellowship at the half-yearly meeting of the examiners in May:—

[illegible] Hospital; James Vere Arkle, M.R.C.S. [illegible] aland University, and St. Thomas's [illegible] University [illegible] Rowland Alessandro Bowling, [illegible] hn Davis Barris, B.A. Camb., [illegible] College, London; Albert Ogi [illegible] London Hospital; Laurence [illegible] Thomas Charles Clare and Joseph Bernard Dawson, Birmingham University; George Coates, M.D. Glas., Glasgow University and King's College, London; James Douglas Cooke, M.B., B.S. Melb., Melbourne University and London Hospital; Vincent Zachary Cope, St. Mary's Hospital; Claude Harold Cross and Reginald Cheyne Elmslie, M.B., B.S. Lond., M.R.C.S. Eng., L.R.C.P. Lond., St. Bartholomew's Hospital; John Dundon, M.B. R.U. Irel., F.R.C.S. Irel., Queen's College, Cork; Watts Edmondson, Yorkshire [illegible] Mungo's College, [illegible] R.U.I., Queen's [illegible] thelbert Rest Flin [illegible] e, Manchester; [illegible] Lond., London I [illegible] French, [illegible] London [illegible] iversity [illegible] Lond., [illegible] Hussey [illegible] ondon; [illegible] Toronto [illegible] M.A., [illegible] ty and St Bartholomew's Hospital; Frederic William Forbes Ross, M.D., C.M. Ed., M.R.C.S. Eng., L.R.C.P. Lond., Edinburgh University and University College, London; Cecil William Rowntree, M.B. Lond., M.R.C.S. Eng., L.R.C.P. Lond., Middlesex Hospital; Wallace Arthur Scott, M.B. Toronto, M.R.C.S. Eng., L.R.C.P. Lond., Toronto University, University and King's Colleges, London; George Stanley Thompson, St Mary's Hospital; Charles Ferrier Walters, M.R.C.S. Eng., L.R.C.P. Lond., University College, Bristol, and King's College, London; Albert James Walton, London Hospital; and Philip Roscoe Wrigley, M.R.C.S. Eng., L.R.C.P. Lond., Owens College, Manchester.

123 gentlemen presented themselves for this examination, of whom 40 passed and 79 were referred.

UNIVERSITY OF CAMBRIDGE.—The following medical degrees were conferred on May 28th:—

Doctor of Medicine.—S. H. Long, Gonville and Caius.

Bachelor of Medicine and Bachelor of Surgery.—J. McBryde, King's; F. H. Pearce, Trinity; W. H. Bradley, Queen's; H. T. Thompson, Christ's; and G. W. Greene, Downing.

Bachelor of Medicine.—H. W. Atkinson and R. F. Williams, Gonville and Caius.

Bachelor of Surgery.—F. S. Kidd and J. E. Spicer, Trinity; J. E. Frere, Pembroke; H. Statham, Christ's; and W. B. Crowfoot, Emmanuel.

The graces for the re-establishment of the professorship of surgery will come before the Senate on June 11th.

ROYAL BRITISH NURSES' ASSOCIATION.—Her Royal Highness Princess Christian will preside at the annual [illegible] Association to be held [illegible] June 6th, at 3 30 P.M.

TENBY.—A large section of the British Medical Association will this year visit the town of Tenby in Pembrokeshire. We are asked to mention the fact that an illustrated souvenir of the town can be obtained gratis and post free upon application to the Secretary of the Improvement Association, Tenby. The guide contains nearly 50 full-page photographic pictures of Tenby and its environs, whilst the descriptive matter is contributed by Dr. D. A. Reid, the borough medical officer of health.

MEDICAL GOLF TOURNAMENT.—The sixth annual tournament was held on May 28th on the links of the Hanger Hill Golf Club, to which club thanks are due for its courteous hospitality. There was a large entry in both [illegible] down to bogey; second prize, tied for at three down by Dr. Vassie and Dr. Maclaren; best last nine holes, Dr. James Taylor with the good score of two up. Second class: Resulted in a tie at four down between Dr. Gordon Watson, Dr. Alderson, and Dr. Schofield; best last nine holes, Dr. Schofield with all square. A keenly contested foursome competition *v.* bogey was won by Dr. Seymour Taylor and Dr. Lyle with the fine score of two down.

CHELSEA CLINICAL SOCIETY.—Dr. C. C. Gibbes, the President of the society, took the chair at the annual dinner of the society, which was held at the Holborn Restaurant on May 26th. In the course of proposing the toast of "The Chelsea Clinical Society" the President traced the origin and rise of the society and congratulated the members on the continued success of their annual debates. He ascribed the satisfactory condition of the society to the fact that what he called subjects of a "high falutin'" character were severely left to be dealt with by the societies which assembled at 20, Hanover-square, and which favoured topics of a high and mighty, but extremely dry, kind. The members of the Chelsea Clinical Society were ordinary mortals and supported their society because it not only afforded them help by means of the papers read at their meetings, but it also enabled them to make a *determined stand against any encroachment* on their rights.—Dr. T. V. Dickinson, the president-elect, responded to the toast, which was followed by that of "Kindred Societies," proposed by Dr. W. Ewart and replied to by Dr. W. Hale White and Dr. G. Herschell. The toast of "The Visitors" was intrusted to Mr J. F. Palmer and acknowledged by Dr. Hector W. G. Mackenzie and Dr. T. B. Hyslop.—Mr. C. A. Morris proposed "The President" and Mr. Noble Smith "The Officers of the Society," to which the officers concerned responded.

Parliamentary Intelligence.

HOUSE OF COMMONS.

THURSDAY, MAY 28TH.

The Infected Blankets.

[illegible] State for War whether, in [illegible] eak of fever [illegible] s, he would [illegible] the officers [illegible] the medical [illegible] all not be in [illegible] ect of the [illegible] though the health committee of the city took steps to prevent the further distribution of these blankets, some portions of the consignments in question had already been sold and distributed to villages in the neighbourhood; and, if so, whether he would state what steps he was taking in the matter.—Mr. Long: I have communicated with the town clerk of Nottingham on the subject, who has informed me this morning that, in consequence of the action taken by the medical officer of health in notifying the persons in the villages referred to who had purchased the blankets, the whole of these articles have been sent back to the firm at Nottingham who supplied them. The town clerk adds that all the blankets which reached Nottingham, some hundreds in number, are in process of disinfection.

Outbreak of Ophthalmia.

Mr. Herbert Samuel asked the President of the Local Government Board whether he was aware that an outbreak of ophthalmia at the Hanwell Poor-law schools had affected 230 children between April 4th and May 16th of this year; whethe [illegible] that this outbreak had been due to [illegible] from the ophthalmic school to th [illegible] he would state what steps had been taken in the matter.—Mr. Long: I am aware of the outbreak which has recently occurred at the schools referred to. The managers obtained the services of Mr. Sydney Stephenson and I have seen a report by him on the subject. It appears that the outbreak was a mild form of conjunctivitis or "blight." This is an ailment which is very prevalent among children and which readily yields to suitable treatment. I am not aware of any report to show that the outbreak was due to the cause referred to in the question. Indeed, the evidence indicates that the infection was introduced into the schools by a child recently admitted from Southwark. I am informed that the managers re-opened a portion of the former ophthalmic school for the reception of the children affected, and I understand that the action which they have taken on the advice of Mr. Stephenson is being attended with success. Only 60 of the children now remain isolated and under treatment.

Epidemics in a Poor-law School.

Mr. Herbert Samuel asked the President of the Local Government Board during how many weeks in the past 12 months there had been epidemics of illness in the Hanwell Poor-law schools.—Mr. Long It appears from a return which I have received from the clerk to the managers that during the year ended Saturday last there have been three slight epidemics of illness at these schools. Thus, there were 59 cases of influenza during nine weeks, 43 cases of chicken-pox during 12 weeks, and 26 cases of whooping-cough during 10 weeks. The total number of cases of all other diseases for the year is nine. During 13 weeks there was no case of disease in the schools. I am informed that there have been no deaths there since June, 1901. This reply does not take account of the mild attack of "blight" which had recently occurred in the schools.

Poor-law Nursing.

Mr. Talbot asked the President of the Local Government Board whether he had taken into consideration the Report of the departmental committee on Poor-law Nursing, dated Nov. 10th, 1902, and whether it was still his intention to recommend the training of a class of qualified nurses in the smaller workhouses.—Mr. Long: I can only state at present that the report referred to is under my consideration.

Royal Army Medical Corps.

Dr. E. C. Thompson asked the Secretary of State for India if he would explain why certain increases of pay and charge pay, granted by Royal warrant of March 26th, 1902, to officers of the Royal Army Medical Corps, and drawn all over the world since that date, were still withheld in India.—Lord George Hamilton: The Royal warrant of March 24th, 1902, amended certain articles of the pay warrant and was therefore subject to the last clause in the preamble of the pay warrant which declares that it is not in force in the Indian empire. The question of the pay of the Royal Army Medical Corps in India has however, been under consideration, and revised rates, giving a substantial increase to the ranks of lieutenant, captain, and lieutenant-colonel, have been sanctioned with effect from Nov. 24th, 1902.

Plague in the Punjab.

Mr. Weir asked the Secretary of State for India if he would state the number of persons who had died from plague in the Punjab since Jan. 1st last, and what percentage of these persons were inoculated with plague serum.—Lord George Hamilton: The number of persons who have died from plague in the Punjab, the population of which is 22½ millions, between Jan. 1st, 1903, and May 2nd (the latest date for which figures have been received) is 141,789. The returns do not distinguish deaths of inoculated persons from deaths of persons not inoculated.

Plague at Hong-Kong.

Mr. Weir asked the Secretary of State for the Colonies whether the system of inoculation with plague serum which was in force in India had been adopted in Hong-Kong and, if not, whether he would consider the expediency of calling for a report on the subject.—Mr. Chamberlain: The honourable Member will see from Dr. Simpson's report which has just been placed in the library of the House that the inoculation of those who wish to be protected with Haffkine's plague prophylactic is already carried on in Hong-Kong, and that Dr. Simpson recommends the continuance of this practice.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to The Lancet *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

Adams, J. E., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

Badcock, C. H., B.A. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to Salisbury Infirmary.

Bevan, A., M.B. Lond., L.R.C.P. Lond., M.R.C.S., has been appointed Clinical Assistant in the Ear Department at St. Thomas's Hospital.

Biddle, Henry G., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer and Public Vaccinator for the St. Peter's District of the Isle of Thanet Union. (Corrected notice.)

Boycott, A. E., M.B., B.Ch. Oxon., has been appointed House Physician to St. Thomas's Hospital.

Bradford, A. B., M.B., B.S. Durh., has been appointed House Surgeon to St. Thomas's Hospital.

Carpmael, N., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

Coates, J., L.R.C.P. Lond., M.R.C.S., has been appointed Clinical Assistant in the Throat Department at St. Thomas's Hospital.

Colman, Frank, L.D.S., has been appointed Dental Surgeon to the East London Hospital for Children.

Dick, G. W., L.R.C.P., L.R.C.S., Edin., has been appointed Certifying Surgeon under the Factory Act for the Shotts District of the county of Lanark.

Edward, A. A., M.D. Edin., has been appointed Certifying Surgeon under the Factory Act for the Haslingden District of the county of Lancaster.

Glanville, W. M. G., M.B., B.Ch. Oxon., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

Guthrie, T., L.R.C.P. Lond., M.R.C.S., has been appointed Clinical Assistant in the Skin Department at St. Thomas's Hospital.

Hedley, J. P., M.B., B.C. Cantab., has been appointed House Surgeon to St. Thomas's Hospital.

Henderson, T. B., M.A., M.B. Oxon., has been appointed House Surgeon to St. Thomas's Hospital.

Hildesheim, O., M.B., B.Ch. Oxon., has been appointed House Physician to St. Thomas's Hospital.

Hutchinson, J. R., M.B., Ch.B. Vict., has been appointed Junior Resident Medical Officer to the Chorlton Union Workhouse Infirmary, Withington.

Ibbotson, W., L.R.C.P. Lond., M.R.C.S., has been appointed Clinical Assistant in the Skin Department at St. Thomas's Hospital.

Joy, C. H., M.D. Durh., has been appointed Certifying Surgeon under the Factory Act for the Tamworth District of the county of Staffs.

Leach, R. E. H., L.R.C.P. Lond., M.R.C.S., has been appointed Clinical Assistant in the Throat Department at St. Thomas's Hospital.

March, J. Ogdin, L.R.C.P. Lond., M.R.C.S., has been appointed to the Medical Charge of the troops in camp at Lechlade, Gloucestershire.

McGill, J. M., M.B., M.S. Edin., has been appointed Certifying Surgeon under the Factory Act for the Annbank District of the county of Ayr.

Milestone, Evelyn Stone, L.R.C.P. & S. Edin., M.D. Brux., has been appointed by the Education Committee, Sheffield, as Medical Officer for examining women teachers and female candidates for pupil teacherships.

Panton, B. N., B.A. Cantab., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Physician to St. Thomas's Hospital.

Philip, A., M.B., M.S. Edin., has been appointed Certifying Surgeon under the Factory Act for the Newport District of the county of Fife.

Reid, W. A., L.R.C.P. & S. Edin., has been appointed Junior House [illegible] and Wakefield General Dispensary.

Ro [illegible] been appointed House Surgeon to [illegible]

Ross, E. A., M.B. Cantab., has been appointed Clinical Assistant in the Ear Department at St. Thomas's Hospital.

Sears, C. N., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

Sergeant, J. N., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Physician to St. Thomas's Hospital.

Sexton, H. W., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

Spurrier, H., B.A. Cantab., L.R.C.P. Lond., M.R.C.S., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

Upcott, H., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

Wheen, C., B.A. Oxo[illegible] has been appointed Assistant House [illegible]

Wood, W. W., M.B., [illegible] under the Factor[illegible] of Stirling.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Army Medical Service.—Examination of Candidates for not less than 30 Commissions in the Royal Army Medical Corps.

Bath, Royal United Hospital.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

Brecknock County and Borough Infirmary.—Resident House Surgeon, unmarried. Salary £100 per annum, with apartments, board, attendance, fire, and gas.

Bristol General Hospital.—Surgeon, also Assistant Surgeon.

Central London Ophthalmic Hospital, Gray's Inn-road, W.C.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

Chester General Infirmary.—House Physician. Salary £90 per annum, with res[illegible]

Croydon, County [illegible] Hospital, Warlingham, Surrey.—Senior [illegible]. Salary £160 per annum, rising to £180, with apartments, board, and washing.

Dudley Guest Hospital.—Assistant House Surgeon, for six months Salary £40 per annum, with residence, board, and washing.

EVELINA HOSPITAL FOR CHILDREN, Southwark, S.E.—Four Clinical Assistants.

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KENT COUNTY OPHTHALMIC HOSPITAL, Maidstone.—Surgeon.

KING'S COLLEGE, London.—Senior Demonstrator in State Medicine Laboratories.

LANCASHIRE COUNTY ASYLUM, Winwick, Warrington.—Assistant Medical Officer, unmarried. Salary £150 per annum, increasing to £350, with apartments, board, attendance, and washing.

LEICESTER INFIRMARY—Assistant House Surgeon. Salary £80 per [illegible]

[illegible]

NEW [illegible]

NOR[illegible] [illegible]ied.

NOR[illegible] [illegible]hnal [illegible] £80

ROY[illegible] [illegible]ists,

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, S.E.—Resident Medical Officer. Salary at rate of £70 per annum.

[illegible] W.—Lecturer on [illegible] street, Cavendish-[illegible]

SHEFFIELD ROYAL HOSPITAL.—Junior Assistant House Surgeon, unmarried. Salary £50, with board, washing, and apartments.

WARRINGTON INFIRMARY AND DISPENSARY.—Senior Resident House Surgeon, unmarried. Salary £120 per annum, with residence and board.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House Surgeon. Salary £50 per annum, with board, lodging, washing, and attendance.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

[illegible]

MARRIAGE.

WEATHERBE—THURGARLAND.—On the 3rd June, 1903, at the parish church, Rotherham, by the Rev. J. W. Goodall, vicar, Dr. Lewis Johnstone Weatherbe of Ivy Lodge, Masboro', Yorks, to Ethel Louise, second daughter of Mr. Godfrey J. Thurgarland of Rotherham.

DEATHS.

FORD.—On January 23rd, at 5, St. Leonard's road, Surbiton, Joseph Ford, M.R.C.S., L.S.A., late of Wedmore, Somerset, aged 74.

HAVILAND.—On May 30th, at his residence, Ridgemount, Frimley Green, after two and a half years' illness, most patiently borne, Alfred Haviland, M.R.C.S. Eng., aged 78. No flowers, by request.

SPRIGGE.—On May 30th, at 6, Prince of Wales terrace, W., aged 26, Mary Ada Beatrice, second daughter of the Hon. Charles Moss, [illegible] M.B., of [illegible]

WE[illegible] 12.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births Marriages, and Deaths

Notes, Short Comments, and Answers to Correspondents.

MEDICAL LEGISLATION IN THE ABRAHAMIC ERA.

CONTROVERSIES regarding the origin, authorship, and date of the Mosaic code have prevailed for 100 years and have within the last few months been revived in an intense form in consequence of archæological discoveries made by M. de Morgan at Susa in the end of 1901 and beginning of 1902. Interest at present centres in the inscription contained on a pillar of black diorite about eight feet high and consisting chiefly of a code of laws made by a Babylonian monarch whose name is variously transliterated as Hammurabi or Khammurabi and whose date is assigned to about 2200 B.C. On the publication, in France, of a photographic reproduction and a translation biblical critics immediately called attention to remarkable similarities in the codes ascribed respectively to Hammurabi and to Moses, the latter of whom is usually considered to have been born between 1600 and 1550 B.C. The discussions growing out of this circumstance will no doubt continue to occupy scholars for many years, but we do not propose to do more than refer to the clauses affecting medical practitioners as quoted on pp. 45–47 of the version by Mr. C. H. W. Johns (The [illegible] Co. 1903. Pp. 88. Price 1s. 6d.) and in the *Deutsche Medicinische Wochenschrift* of May 21st. The code consists of 282 clauses, those relative to practitioners of human and veterinary surgery being numbered 215 to 225. Scales of fees are authorised for surgical operations both on man and on domestic animals and a terrible fate was in store for the operator in the event of the human patient either dying or losing an eye. Ophthalmic surgeons must have been greatly devoted to their art who were content to accept the alternatives of a fee of from two to ten silver shekels when an operation was successful or amputation of both their hands when it failed. The following version is taken from the translation by Mr. Johns. The German rendering given in the *Deutsche Medicinishe Wochenschrift* differs from it in a few quite unimportant particulars. For instance, in the German the words "gentleman" and "bronze" are not represented and the word which Mr. Johns has translated "sheep" appears as "ass" (Esel).

§ 215. If a doctor has treated a gentleman for a severe wound with a bronze lancet and has cured the man, or has opened an abscess of the eye for a gentleman with the bronze lancet and has cured the eye of the gentleman, he shall take ten shekels of silver.

§ 216. If he (the patient) be the son of a poor man, he shall take five shekels of silver.

§ 217. If he be a gentleman's servant, the master of the servant shall give two shekels of silver to the doctor.

[illegible] cut off his hands.

§ 219. If a doctor has treated the severe wound of a slave of a poor man with a bronze lancet and has caused his death he shall render slave for slave.

§ 220. If he has opened his abscess with a bronze lancet and has [illegible] silver to the doctor.

§ 222. If it is the son of a poor man, he shall give three shekels of silver.

§ 223. If a gentleman's servant, the master of the slave shall give two shekels of silver to the doctor.

§ 224. If a cow doctor or a sheep doctor has treated a cow or a sheep for a severe wound and cured it, the owner of the cow or sheep shall give one sixth of a shekel of silver to the docto as his fee.

§ 225. If he has treated a cow or a sheep for a severe wound and has caused it to die, he shall give a quarter of its price to the owner of the ox or sheep.

ANGIO NEUROTIC ERYTHEMA AND ITS SURGICAL TREATMENT BY NEURECTOMY.

IN the May number of the *Bulletin of the Johns Hopkins Hospital* Dr. Joseph C. Bloodgood has published an account of three cases of angio-neurotic disease, in one of which the condition was multiple and was relieved by division of the nerves over the distribution of which the area of erythema and œdema extended. The patient was a female, white, and 17 years of age. She came under Dr. Bloodgood's observation in July, 1900. Her illness began about eight months before that date with signs of an abscess at the root of the right upper bicuspid tooth. There were persistent pain and tenderness referred to the right gum and cheek, and after about six

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Letters, each with enclosure, are also acknowledged from—

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An Address

ENTITLED

A FEW JOTTINGS IN PHYSIOLOGICAL MEDICINE.

Delivered before the British Balneological and Climatological Society on May 21st, 1903,

BY GEORGE OLIVER, M.D., F.R.C.P. LOND.

MR PRESIDENT AND GENTLEMEN,—One of the far-reaching branches of physiology which has of late years been pressed into the service of medicine is the study of blood pressure and of the distribution of the blood. I propose to-night to glance at a few sections of this interesting chapter of physiological medicine which have more particularly engaged my attention during the past year or two and which may be of interest to some of you as practitioners in balneology.

NORMAL BLOOD PRESSURE.

The first requisite for the clinical study of blood pressure is a knowledge of the normal blood pressure, for that is, of course, the standard to which clinical deviations should be referred. It is well recognised that in healthy subjects it is liable to very appreciable variations above and below a certain mean and *these extremes of normal fluctuation* should be familiar to the practitioner. They are due to such physiological conditions as the ingestion of food, exercise, and temperature. I have taken the opportunity afforded by the past winter's rest from clinical work to study afresh these normal fluctuations of the circulation and I will now sketch an outline of the results. It may appear to you to be somewhat of a reversion nowadays to re-examine some of the elementary facts in our studies of blood pressure, but I think you will agree with me that the best possible assurance we can have of advancing securely in a somewhat untrodden field like this is to retrace our steps occasionally and to re-test *the safety and soundness of the track. In so doing* we may verify or correct our position and, moreover, we may perchance pick up a few fragments of truth which before we passed by unheeded. For the most part the observations on the arterial pressure were made with the hæmodynamometer, but Hill and Barnard's sphygmometer and Gärtner's tonometer were likewise used.

I have elsewhere[1] shown how delicate readings of the arterial pressure may be read for physiological purposes by the blood-pressure gauge. A small artery (like the superficialis volæ) is selected and the pulsation of the indicator is gradually developed to its maximum degree by gently increasing the pressure on the water pad when the reading is made and then it is found that beyond this point the motion at once diminishes. With a little practice differences of even one or two cubic millimetres of mercury may be reliably read. I have found it useful to use rubber covers[2] *which can be placed over* the *pad so that the motion* of the radial pulsation can be limited to a similar minimum range. [illegible] the arterial pressure [illegible] prevents a secondary [illegible] pt to be produced in some cases when a high pressure is applied to the pad and which may lead an observer to think that the arterial pressure is higher than it is.

THE INFLUENCE OF DIGESTION ON THE CIRCULATION.

During the past winter I have been much interested in the effects which the ingestion of food produces on the circulation. I had previously worked on this subject and the *results of the observations then made,* and published in 1901, were confirmed; but this more thorough and more critical inquiry has revealed an extension of these results. It has shown that the ingestion of food initiates a most interesting series of circulatory events which recur with perfect regularity after every meal. The observations have proved that the influence exerted by the act of digestion on the circulation is not a mere transitory one, which may pass away, for example, within half an hour or so after a meal; it is a much more prolonged physiological disturbance which can be traced for fully three or four hours.

I will first describe the effect of digestion on the arterial pressure, then on the capillary and venous pressures.

In Fig. 1 are recorded hourly observations of the mean arterial pressure throughout the day from 8.30 A.M. to 10.30 P.M. in a subject leading an ordinary quiescent life with comparative rest of the muscles. You observe that the pressure follows a rhythmical course, that there is a marked *rise immediately after each meal which attains its maximum* development in an hour and then the pressure slowly subsides. This wavelike rise and fall of the arterial pressure produced by each meal last from two and a half to four hours. I have observed that the amplitude and length of the curve are, as a rule, proportionate to the size of the meal. The observations show that the average maximum rise of the mean arterial pressure attained in an hour after a meal amounts to 15 cubic millimetres of mercury, though it may reach 20 cubic millimetres; for example, a typically normal wave should rise from 100 to 115 cubic millimetres and then gradually return to 100 cubic millimetres.

FIG. 1.

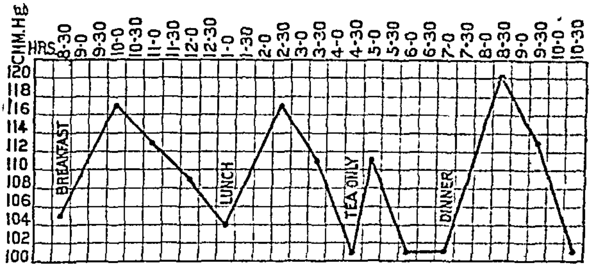

Chart showing the hourly observations of the mean arterial pressure.

Now you will naturally ask: Why should we have a rise in the arterial pressure *after meals, when dilatation* [illegible] make for a lowering of [illegible] teriometer shows that [illegible] when the splanchnic [illegible] erefore apparently a compensatory reduction of the systemic area of the circulation and the increased tonus of the arteries is one *factor* in raising the arterial blood pressure, the other being cardiac—an increase in the output of the ventricle and stimulation of ventricular contraction. These digestive waves are also present when the arterial pressure is above the normal range.

In determining the arterial pressure in clinical work a correction for the influence of digestion on the mean arterial pressure may be usefully made by applying the following rule: to deduct 10 cubic millimetres of mercury from a pressure observed within two hours after a meal and five cubic millimetres *of mercury during* the third hour. The best time to make a reliable observation of the mean arterial pressure is within an hour before a meal.

The study of the capillary and venous blood pressures during the digestive circulatory wave has likewise afforded some interesting results. The venous blood pressure is easily determined by a method of using the hæmodynamometer elsewhere described,[3] but so far no reliable method of gauging the capillary blood pressure has been suggested. I have, however, employed a method which is simple and practical, but as I hope to improve it I will not now describe it. This method has, so far, shown that the capillary blood pressure is considerably raised at the acme of the digestive circulatory wave and that it *then gradually falls during the* decline of the disturbance. The rise and fall of the capillary blood pressure therefore coincide with those of the arterial blood pressure. The venous blood pressure, on the other hand, generally falls during the full development of the digestive circulatory wave; and when it does not fall it fails to rise with the capillary and arterial pressures. These facts suggest that the venules—endowed, as you know, with muscular tissue which surely serves some purpose in the economy of the circulation—play an important part in regulating the capillary blood pressure; at one time, as at the acme of the digestive wave, contracting and so increasing that pressure and then relaxing and letting it down again. This regulating influence of the venules, however, only comes into play when the body is at rest, for it is overcome during exercise which raises both the venous and the capillary pressures together. I have just lately discovered that my friend, Sir Lauder Brunton, so long ago as in 1879 when writing on the contractility of the veins anticipated this function of the venules. "It is obvious that if venous radicles contract they may oppose a resistance to the flow of blood in the capillaries and by thus increasing the pressure within them may cause more fluid to exude from them into the tissues."[4]

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[1] See Blood and Blood Pressure, 1901.

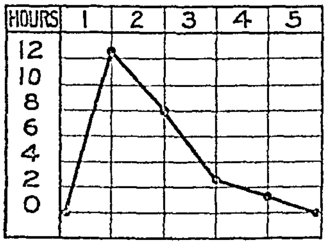
[2] Made by Mr. Hawksley, 357, Oxford-street, London, W.

[3] See the Journal of Physiology, Cambridge and London, 1902, and Blood and Blood Pressure, 1901.

Why should the capillary pressure be raised during the digestive disturbance of the circulation? As suggested by Sir Lauder Brunton a rise in capillary blood pressure may cause an increased exudation of tissue fluid. The experimental work of Ludwig and Noll;[5] of Starling,[6] of Lazarus-Barlow,[7] and of others undoubtedly supports this view and, following a new method of observation by which the tissue lymph may be measured, I have been fortunate enough to obtain confirmatory evidence of it in man. May not these periodically recurring variations of the capillary blood pressure which accompany the act of digestion be of supreme importance in nutrition? Moreover, do they not afford us a glimpse of a much broader fact than is signified by the mere act of digestion? For when food is taken there is, it would seem, not only the internal flow of the digestive secretions, but likewise a concurrent exudation into every tissue of nourishing fluid expressed from the blood into the interstitial spaces. Should further inquiry substantiate this view the physiological significance of the prolonged rhythmical movement in the circulation produced by the ingestion of food will be apparent.

In reading quite lately Pawlow's lectures on the work of the digestive glands I could not avoid observing the similarity of the form and duration of his curve of the secretion of gastric juice in the dog after a meal with the curves of arterial blood pressure incited by digestion in man —as if both were concurrent events which proceeded from the same physiological movement in the system. For the purpose of comparison I have reproduced one of Pawlow's gastric juice curves in Fig 2. I have observed that the beverages tea and coffee produce a similar rhythmical disturbance of the circulation to that which follows the ordinary meals; it is, however, less pronounced and shorter (see Fig. 1).

FIG. 2.

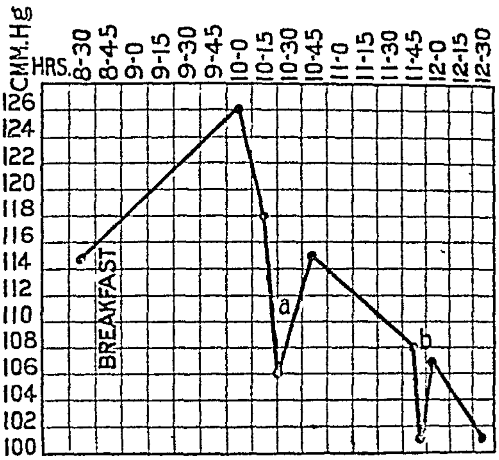


Curve showing the secretion of the gastric juice after a meal of flesh. After Pawlow.

THE INFLUENCE OF EXERCISE ON BLOOD PRESSURE.

It is now well known that the primary effect of exercise is to raise the arterial pressure, but I do not think that it is as generally recognised as it should be that this immediate rise of pressure is but temporary and is soon succeeded by a marked fall, which fall continues during the further continuance of the exercise and for some time after the cessation of it. The peripheral tubing very soon widens and the rise is thus converted into a fall. *Fig.* 3 illustrates how quickly and how effectually the mean arterial pressure may be lowered by merely throwing the muscles of the limbs and trunk into a state of contraction for short intervals. You observe two deep indentations in the curve of the digestive wave: they are the impressions made on the normal course of that curve produced by throwing the muscles into a state of sustained tension for two minutes. In spite of these interruptions the digestive wave of blood pressure continues its course, and ultimately subsides in a normal manner. The effect is therefore only temporary; but it is instructive in showing how great is the power of muscular contraction to lower the arterial blood pressure. This is the fundamental fact in resistance exercises. But this fall in the arterial pressure is but a portion of the physiological fact which we are now studying; it is simply the result of the widening of the arterioles produced by the muscular contraction—a fact which is proved by the rapid, though transitory, concurrent rise in the capillary and venous blood pressures. It therefore follows that mere static muscular contraction lets down, as it were, a large volume of arterial blood into the capillaries and in this way brings more oxygen within reach of the tissues and thus raises the metabolic processes. But it may do more than this, for by raising the capillary pressure it may greatly accelerate and increase the flow of interstitial fluid filtered from the blood into the vacuoles of the tissues and may thus flush these spaces and favour the clearing away of residue from them. From the clinical standpoint such effects as these produced by muscular action should prove useful in the treatment of diseases of the suboxidation type in which the removal of waste products is imperfect, as in chronic goutiness.

FIG. 3.



Showing the effect of two minutes' static contraction of the muscles (a and b) on the digestive curve of the mean arterial pressure.

A large group of our cases at a health resort have as a prominent feature of their circulatory disturbances a hypertonic[8] state of their arteries and arterioles and in a large majority of these cases the mean arterial pressure is considerably raised. In some such cases both the capillary and venous pressures are lowered together, showing the predominance of arteriolar contraction, while in others the capillary pressure is raised along with the arterial while the venous pressure is lessened, indicating the preponderance of venular contraction. Now, in such cases the pulse is generally felt to be small and is often reported as feeble and the hands and fingers are apt to be clammy and cold and sometimes they may even afford a cold fish-like impression to the touch, but when the capillary pressure is raised the hands are generally warm. The unguarded physician is apt to regard these signs as indicating a feeble heart and a weak circulation, and when he places his hand over the apex and finds it displaced outwardly he is confirmed in that view. In many such cases the heart muscle remains unaffected but in nearly all the second aortic sound is markedly accentuated. In nine out of ten such cases the trouble originates in the periphery of the circulation. The physiological tonus of the arteries, arterioles, and venules has passed the normal bounds and become pathological. There is, in fact, a persistent hypertonic condition which often threatens to overmaster the ventricle. The embarrassment is peripheral, and the bravely acting heart muscle is apt in time to yield, and, indeed, does very frequently yield, and then there is established a new centre from which a fresh series of [illegible] ...e majority of [illegible] at a well-eq[illegible] disordered peripheral mechanism; and then the blood-pressures (arterial, capillary, and venous) either approximate to their normal relationship to one another or they become normal. Then it becomes after the course of treatment a matter of some importance to suggest such simple methods of preventive management as may be easily followed up at home so that the benefit acquired from the visit may be maintained. Among other measures designed to this end I have found static or tension exercises of considerable value. At first the duration of the sustained tension of the muscles should be brief—so as not to be irksome—and as time goes on it should be lengthened. The exercises should be practised perseveringly at all odd times and seasons, but especially during the hour before every meal—this being the time when nature herself produces a normal fall in the arterial blood pressure. It is interesting to find how such exercises will frequently warm the extremities. One patient (a medical man) volunteered the remark that in his case the effect resembled that of a dose of nitro-glycerine; and that reminds me that Brunton and Tunnicliffe suggested in a recent article that muscular contraction may produce some product which possesses the property of dilating blood-vessels.

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[4] Collected Papers on the Circulation and Respiration, by Sir Lauder Brunton, F.R.S., 1903, p. 537.

[5] Zeitschrift fur Rationelle Medicin, 1850, Band ix., S. 52.

[6] Journal of Physiology, Cambridge and London, vol. xvii.

[7] Ibid., vol. xvi.

[8] The convenient term "arterial hypertonus" was first employed by Dr. W. Russell (THE LANCET, June 1st, 1901, p. 1519).

It is apparent that the ultimate physiological effect of muscular contraction on the circulation is much the same as that induced by warmth—namely, a widening of the peripheral channels and a consequent easing of the work of the heart and a proportionate lowering of the arterial pressure. But beyond this result common to both there is a difference between the therapeutic effect of warmth and that of exercise, for heat merely relaxes muscular fibre, while exercise—even though tiring at the time—is followed by improved tone and vigour. It seems to me that physiology has a promising suggestion to offer to account for this difference; for Ranke showed that whenever muscles contract they absorb water from the blood. Now that water is proteid-containing water, which, after serving the immediate needs demanded by the contraction, may provide for repair and construction. So that we may say that exercise, like heat, expands the contracted peripheral mechanism and thus reduces the consequent increased arterial blood pressure, but does more than heat in providing for repair.

It is an easy matter to test this lowering effect of muscular tension on the blood pressure during the course of your examination of a case. I have frequently done so. Of course, you must see that the patient breathes quietly and regularly when he throws the muscles into static contraction. You will not uncommonly find, when the arterial pressure is raised while the venous is lowered, that after a minute's muscular tension the former will fall 20, or even 30, cubic millimetres of mercury and the latter will be doubled.

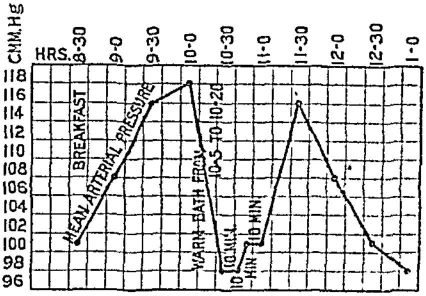
THE INFLUENCE OF TEMPERATURE ON BLOOD PRESSURE.

We now come to the third leading cause of variation in the blood pressure—namely, temperature. We are all familiar with the contracting influence of a fall of temperature on the arterial wall with rise in blood pressure and the relaxing effect of warmth with lowering of that pressure; but few of us, I think, quite realise how powerful is the influence of changing temperature, not only on the systemic blood pressure, but on all the physiological processes governed by that pressure. With a view of obtaining some evidence bearing on this point I registered daily at 8.30 every morning for over three months during last winter the mean arterial pressure and some other physiological data, as well as the temperature, as recorded in Stevenson's screen and in the room. Though these observations on the circulation were made in the house and before experiencing the influence of the outside air the record obtained was certainly instructive, for it showed that the circulatory mechanism is very sensitive to thermic variations in the weather. The record is, of course, too long to quote in detail. Suffice it to say that the average reading of the mean arterial pressure was 120 cubic millimetres of mercury for all the screen temperatures below 36° F. and 107 cubic millimetres of mercury for all those above that temperature.

Such striking effects being traceable in a normal subject we gain some notion of the disturbing influence of thermic changes of the weather on many of our sensitive patients. Thus it may be that "cold snaps" (as they are popularly called) may throw as much additional strain on a yielding ventricle as may result from an uphill walk, even though the patient be quiescent. Surely our patients suffering from arterial hypertonus need quite as much the protecting influence of an equable winter and spring as do our bronchitic invalids.

Fig. 4 shows the effect of a warm bath (temperature 100°) on the mean arterial pressure taken a little over an hour after a meal. You observe how deeply it indents the normal course of the digestive wave of blood pressure. The influence of warmth quickly passes off, as in this example. It is nevertheless a great power when judiciously directed in balneological practice. It acquires its force as a curative agent by repetition, as in a course of baths. My physiological observations have suggested that in certain cases the beneficial influence of warm immersion bathing may be enhanced by directing the patient to throw the muscles into a state of tension for short intervals during the immersion. In this way the dilating effect on the periphery of the circulation is increased and the warm bathing becomes less relaxing. I have also found it useful to direct those patients who suffer unduly from the exhausting effects of warm-immersion baths to contract the abdominal muscles frequently, so as to reduce the abdominal stasis which warmth encourages. Massage, and especially abdominal massage, is also a valuable addition to the warm-immersion bath.

FIG. 4.



Showing the effect of a warm bath on the digestive curve of the mean arterial pressure.

To return from this slight digression. Cold may raise the line of the digestive curve on the blood pressure scale, so that the commencement and the finish may read from five to 10 cubic millimetres higher than the strict normal (100) and warmth may lower these points two or three cubic millimetres. These figures furnish somewhat of a guide to the clinical correction for the effects of temperature on the arterial pressure.

It will be recognised from this sketch of the respective parts taken by these three leading causes of variation in the arterial pressure—digestion, exercise, and temperature—that the influence of digestion is paramount and constant, for the long curves of rise and fall produced by the meals recur with perfect regularity and persist beyond the temporary variations of the blood pressure produced by muscular action and by temperature, which therefore modify the line of these curves in a mere transitory way.

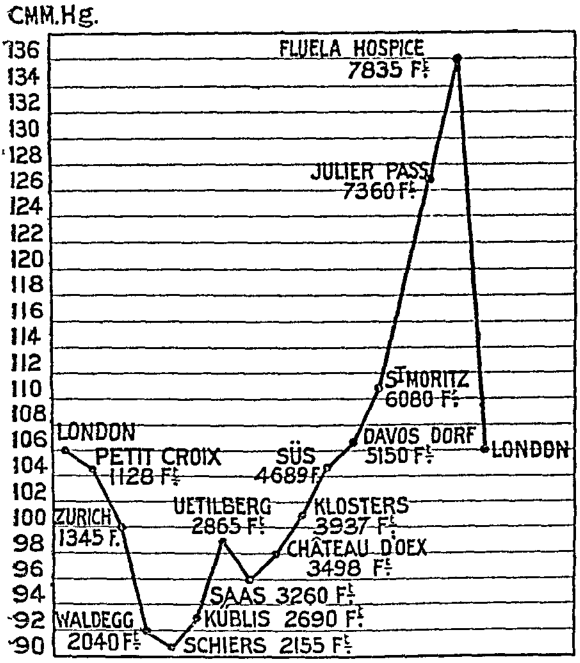
THE INFLUENCE OF ALTITUDE ON THE BLOOD PRESSURE.

In the winter of 1899-1900 I made some observations at Arosa (5800 feet) in Switzerland on the mean arterial pressure with the view of ascertaining the effect of altitude upon it. These observations led me to conclude that in the winter months the blood pressure is raised in high altitudes. Inasmuch as intensely cold weather prevailed during the visit I could not on that account regard my observations as altogether conclusive, especially, too, as other observers were led to believe that altitude lowered the blood pressure. Summer is undoubtedly a more suitable period of the year for observations of this kind than winter, for then there is less liability to encounter the disturbing influence of a low temperature. Unfortunately for myself, I can only make any such observations in the winter; still, even then they may prove instructive—for if it be a fact that altitude does lower the blood pressure and if that lowering influence is apparent in the cold months it should on this account be all the more readily accepted.

Having last January and February five or six weeks at my disposal I spent them in Switzerland, where I made a large number of observations at different altitudes, and at some (Château d'Oex, St. Moritz, Zürich, Klosters, and Süs) the blood pressure was taken at different times. At Château d'Oex (3498 feet) and at St. Moritz (6080 feet) serial observations were made at 8.30 every morning in a warm room and a number of digestive waves were recorded, and the effects of exercise on the blood pressure at these altitudes were also determined. Having previously to the visit made a large number of observations of the blood pressure under the same conditions at home I had the advantage of having a well-worked-out standard for comparison. Besides these observations on myself I made others on another subject, on many visitors, and on some residents.

Now what is the teaching afforded by the three groups of the observations—namely: (1) those made apart from the influence of digestion and exercise; (2) those afforded by the digestive waves; and (3) those furnished by exercise? In Fig. 5 are plotted out the mean arterial pressure determined at 8.30 A.M., or an hour before a meal, in a state of rest in London and at 14 different altitudes, advancing progressively from 1128 to 7835 feet. You will observe that at about 1000 feet there is no appreciable change; that a marked fall is apparent when a little over 2000 feet is reached; that at 3500 feet (Château d'Oex) the blood pressure, though somewhat higher than at the lowest point reached, is much lower than at home; and that above that altitude (3500 feet) there is a rise progressive with the altitude until we reach the highest point, the Fluela Pass (7835 feet). The digestive waves of blood pressure at Château d'Oex began at, and fell to, a much lower point on the blood pressure scale (97 cubic millimetres) than at St. Moritz (110 cubic millimetres). The effects of exercise on the arterial pressure also show that the pressure is lower at Château d'Oex than at home or at St. Moritz and that it is higher at St. Moritz than at home. At home the usual effect of active exercise is to cause a fall of my arterial pressure to 97 cubic millimetres (observed just after the exercise is over). At Château d'Oex a similar amount of exercise reduced the pressure to 92 cubic millimetres, but at St. Moritz I could not diminish it below 105 cubic millimetres.

Fig. 5.



Showing the mean arterial pressure taken at 8.30 A.M., or an hour before a meal, at various altitudes in Switzerland in January and February, 1903.

After completing the foregoing observations I made some interesting readings of the arterial pressure at Zürich where there is a railway which ascends in half an hour from 1345 feet (Zürich) to 2865 feet (Uetliberg) with a midway halt, 2040 feet (Waldegg). The uniform temperature and rest of the railway carriage afforded the most favourable conditions for comparable observations of the blood pressure. The results furnished by the up and down journeys, which corroborate each other, appear in Fig. 5 and confirm in a general way the previous observations made at similar altitudes. The concurrent testimony of all these observations made in winter points, I think, to the conclusion that altitude does lower the blood pressure within certain limits—and especially so between 2000 and 3500 feet—above which the pressure rises.

When one thinks of it, it is surely improbable that altitude should either lower or raise the blood pressure progressively throughout all gradations, for in either case life would soon be threatened or would cease. We know that nature when dealing with organic life does not, as a rule, work in straight lines; it is but the limitations of our view that give us that impression. She is ever deviating by her corrections to her beneficent ends. We should not, therefore, be surprised by this contrary effect of altitude on the blood pressure, as it is apparently but an example of this universal law, for the observations suggest that at a certain point the lowering influence of the reduced atmospheric pressure is met by an adjustment on the part of the organism. How is this adjustment brought about? The observations show that in the higher altitudes (6000 feet, as at St. Moritz) the heart's action is more frequent and the calibre of the arteries is somewhat smaller than in the lower elevations (3000 feet or so, as at Château d'Oex). The morning observations give an average pulse-rate of 76 at St. Moritz and of 71 at Château d'Oex and an average radial calibre 0·4 millimetre less at the former than at the latter place. I think we may therefore conclude that the progressive rise in the mean arterial pressure observed in the higher elevations is the result of an increase of the output of the heart and of the normal tonus of the arteries. Observations at St. Moritz on several visitors—even on those who had been sojourning there for two and three months—and on one whom I had observed at Château d'Oex were exactly similar to those on myself; but those made on a few natives showed that the mean arterial pressure in them was lower—in fact, it was much the same as in England. From this it may be inferred that acclimatisation in a high altitude is not a question of a few months only.

I am sorry that I could not prolong my visit so as to extend these observations to other altitudes and to verify or to correct those already made by repetition, and I regret this the more because at the highest point reached—namely, on the Fluela Pass (7835 feet)—it seemed to me as if a second compensation, having for its object a reduction of the blood pressure, were coming into play—namely, a vagus effect. I hesitate to mention this single observation as there may be nothing in it. I was, however, struck with the fall of 10 beats per minute below the average pulse-rate which I had observed at St. Moritz, as a slow pulse at the highest altitude reached seemed to be somewhat noteworthy. Should a vagus effect develop in still higher elevations it would, of course, counteract the rise of blood pressure maintained by a further increase of the arterial tonus and might afford a suggestion as to the cause of that mysterious ailment "mountain sickness."

I merely give you my limited observations, which without further extension you should regard as but tentative, though they were made with care so as to exclude fallacies as much as possible. I trust that other observers may be induced to take up this work and to report their results. Climatology is sorely in need of exact physiological data and we cannot have too many good observers. I think it is highly probable that in the warm months the lowering influence of altitude on the blood pressure may extend to a much higher limit than my observations made in winter indicate, for warmth reduces the arterial tonus. But so far as these observations go I am inclined to think that they have a suggestive bearing on practical climatology. I am not aware of a climatic condition that will lower the mean arterial pressure to the same extent as the medium altitudes. Why should we not think of this when deciding where to sent some of our patients with *plus* arterial pressure in the winter months? Then, again, our colleagues at Aix-les-Bains and other bathing resorts abroad for the gouty wisely advise their patients after the course to resort to a moderate altitude for their "after cure"; now according to these observations this advice may mean that the effect of the baths in lowering the arterial pressure will be maintained until the patient has recovered from the strain of the treatment. Then there is a thought that will occur to you in connexion with the higher blood pressure maintained in the winter by the higher altitudes. These should be well adapted to the climatic treatment of cases which require construction and repair, such, for example, as the phthisical, and should be contra-indicated in cases in which the removal of waste products should be the keynote of treatment, such as in gout and chronic Bright's disease, and should be further contra-indicated when we cannot be sure that the heart muscle will safely bear the additional strain of a high altitude.

[The address concluded with some remarks on the clinical value of determining blood pressure and on the importance of adopting such methods of observation as exclude the personal equation as much as possible and render clinical data equally appreciable to all.]

An Address

ON

PARASYPHILIS.[1]

Delivered before the Fourteenth International Congress of Medicine held at Madrid in April,

BY GEORGE OGILVIE, B.SC., M.B. EDIN., M.R.C.P. LOND.,

PHYSICIAN TO THE FRENCH HOSPITAL AND SENIOR PHYSICIAN TO THE HOSPITAL FOR EPILEPSY AND PARALYSIS, MAIDA VALE, LONDON.

WITH an Apollonian "Inventum medicina meum est," Fournier proclaims himself the "inventor" of parasyphilis. Indeed, the numerous contributions to the subject which have followed the publication of his work in 1894 seem to me more or less μιᾶς φωνῆς πολλαὶ ἀντανακλάσεις—the re-echoings of his powerful and far-reaching voice. Thus to discuss the principles of the doctrine and its bearing on retrospective diagnosis and treatment means nothing else than to discuss the principles laid down and the conclusions drawn in Fournier's writings. I am therefore justified in closely following and limiting myself to his line of argument. Dr. Edmund Fournier's book on the same subject I shall treat as one of his father's, as he himself declares, "que so[illegible]" [illegible] philitic in ori[illegible] eatures are th[illegible] e met with independently of syphilis; they may be due to other causes as well, they are *banal*,[2] while syphilitic lesions, properly so-called, such as mucous patches and the gumma, are never produced outside the domain of syphilis. 2. The so-called specific drugs—i e., mercury and iodide of potassium—have a totally different influence upon parasyphilitic affections from that which they are known to exercise upon true syphilitic lesions. "There is really an abyss between the one and the other." These drugs are said to have either no effect at all upon parasyphilis or the effect is slow and incomplete, while in the case of syphilis proper it is "rapid and efficient." "These two principal features," according to Fournier, "seem to establish a well-marked line of demarcation between syphilitic affections proper and the so-called parasyphilitic ones."

If from a clinical point of view the specificity of the mucous patch[3] and the gumma has to be granted there still remain among true syphilitic lesions a great many which, to use Fournier's own words, are "banal and borrowed from ordinary pathology." As such he himself mentions the disturbances of the general health, *fever, anæmia, asthenia, wasting, cachexia, &c.*, as well as aches and pains, neuralgias and neuroses, which have nothing specific besides their origin. He also mentions rashes of the skin, so similar to, and so much resembling, common rashes that t[illegible] to differentiate betwe[illegible] yet truly syphilitic le[illegible] Hutchinson has made the remarkable statement that all the various phenomena of disease due to syphilis are imitations of other non-specific type forms. "We have," he says, "absolutely no malady which is peculiar to syphilis." Without going so far it will have to be granted that, apart from those mentioned by Fournier himself, numberless affections, such as iritis, choroiditis, hemiplegia, paralysis of single nerves, transverse lesions of the spinal cord, &c., present nothing specific apart from their origin. Nobody would think of excluding all these manifestations of true syphilis from the domain of syphilis proper under some other name for the sole reason that they are "banal." Moreover, there is among those who grant the specificity of certain syphilitic affections a great diversity of opinion [illegible] n—viz., [illegible] e, inter- [illegible] e state- [illegible] to base the diagnosis of inherited syphilis on this symptom alone. It is the same with the notched teeth which go by his name. And with regard to either symptom he has many convinced followers. According to Fournier, and perhaps the majority of syphilographers and ophthalmic surgeons of our time, both symptoms are to be met with in other diseases besides syphilis, they are "banal." Interstitial keratitis is to some nothing but an expression of impaired nutrition, to others as frequently of tuberculous as of syphilitic origin. Leucoderma is given by Fournier as the classical prototype, the type *par excellence*, of a parasyphilitic lesion. On the other hand, I. Neumann of Vienna says that there exists at present only one opinion—viz., that leucoderma is *absolutely* characteristic of syphilis. Very few, I believe, will not subscribe to this statement. Opinions are likewise divided with regard to ophthalmoplegia externa, to the skin infiltration of the newly born, to certain forms of choroiditis, to spastic spinal paralysis, &c. On the other hand, it seems that at least one [illegible]

reference to gumma of the palate 44 per cent. were [illegible] esses that this pro- [illegible] *taking into account* [illegible] alls "*la chance des* [illegible] or identity of a number of consecutive cases—he proposes to reduce it and even to diminish [illegible] ordinary scale [illegible] sequence. Tha[illegible] syphilitic his[illegible] Fournier, is [illegible] are less than [illegible] one takes into consideration the mental state of some of the patients on whom we have to rely for their previous history—"without mentioning all the cases of syphilis abnegated or wilfully concealed, of syphilis overlooked or unnoticed, also the cases of conceptional hereditary syphilis"—one would scarcely be surprised to find the final figures on the *other* side of a hundred, in the same way as the addition of certain mortality statistics leads to figures in excess of the birth-rate. I may be allowed to remark that from my own experience, which extends over more than 140 hospital and no small number of private cases, I am personally convinced of the important part which syphilis plays in the production of tabes without, however, going to extremes or even believing that the question has been finally settled. Different observers from different parts of the world have pointed to the non existence or infinite rarity of tabes in districts where syphilis rages endemically. At the first glance this seems to be a very strong argument against the specific origin of tabes. Yet it has to be borne in mind that exactly the same has been reported with regard to other affections, which in our climes at least are undoubtedly a frequent consequence of syphilitic infection, such as diseases of the eye. How far functional use or "irritation" influences the localisation of the noxious effects of the syphilitic poison we do not know. With the present state of our knowledge we must confess that certain facts in the pathology of tabes are only with great difficulty, if at all, reconcileable to the doctrine of its syphilitic origin. Anyhow, it seems strange to call an affection "specific" which in its antecedents lacks evidence of syphilis in from 22 to 44 per cent., while another should be "banal" with less than 10 per cent. I am not aware that this strange contradiction has been pointed out before, much less that it has been satisfactorily explained. In his recent careful and interesting statistics of tertiary syphilis Neisser gives the percentage of those who present tertiary symptoms without a history or evidence of previous infection at about 50. How can it, then, be explained that an affection likes tabes, which after all belongs to the late sequelæ of the disease, should in its previous history afford evidence of syphilis with such astounding frequency? The only explanation which presents itself to my understanding is that some seekers after syphilis will seek and find even an "absent argument." For general paralysis the percentage is by several authors given as high as for tabes. The obvious consequence would be that the disease cannot be called "banal." Banality, one of the "characteristics" of parasyphilitic affections, is, as we have seen, not an attribute of all of them, while it is an attribute of numberless syphilitic affections. Which particular affections are to be considered specific, which "banal," is, after all, to a large extent a matter of personal opinion. Anyhow, the most banal of lesions may be and frequently is syphilitic.

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[2] It is strange to find Fournier constantly using a term against which he has so long and so vehemently waged war.

With regard to the second "characteristic"—the influence of specific drugs—it must be admitted that this seems only a question of degree. Of course, in many syphilitic affections the effect of mercury and iodide is "at once intense and rapid." But I am not going to enumerate all those in which it is slow, little, or none. Quite apart from cases of idiosyncrasy to the drugs, or cases of malignant syphilis, one has only to think of the many disappointing results in cases of hemiplegia, choroiditis, ophthalmoplegia, spastic spinal paralysis, &c., to realise the incongruity of making the effect of the drug a criterion of the nature of the disease. On the other hand, it is not generally admitted that specific drugs are powerless in leucoderma, tabes, and general paralysis. Good results have been reported in general paralysis and in tabes which unfortunately I have never been able to obtain. Fournier himself has had most satisfactory results, amounting to *complete cures*, in cases of parasyphilis, where one would expect them least—viz., in certain heredo-syphilitic dystrophies—and he advocates mercurial treatment in most cases in which parasyphilitic affections are met with in children only suspected of heredo-syphilis. "Those who think that the result of treatment by specifics may be relied upon as establishing the diagnosis may easily make great mistakes. Syphilitic affections often resist treatment for a long time (I may add, even altogether) and, on the other hand, mercury and iodides often effect the greatest possible good in cases which are not syphilitic" (Hutchinson). How, then, could a "characteristic" of this kind be of use in drawing a line of demarcation between two classes of affections supposed to differ in nature? Later on I shall have to say a word on the "nature" of parasyphilitic affections in general. Of the arbitrariness which must of necessity reign in allotting a certain disease to one of the two classes of affections I want to give at least one instance. Interstitial keratitis, according to Fournier, is not necessarily syphilitic, an opinion in which I concur. All will agree that if at all it is neither rapidly nor intensely influenced by drugs. Its course may be shortened and attenuated, but on the whole it is an affair of many months, whether treated by specifics or not, it is never cut short by them, and with the most energetic treatment is often extremely tedious. Yet this affection, bearing both the characteristics of parasyphilis, is not classed under the latter. This example conclusively demonstrates that either of the two criterions taken singly, or together, is utterly unfit to decide anything respecting the nature of the disease. Take, for instance, a case of spastic spinal paralysis, or of choroiditis (both "banal" affections) of undoubted syphilitic origin, as proved by the co-existence of such specific lesions as a gumma, which latter disappears under specific treatment, while the paralysis or the choroiditis remains little or not at all influenced. Such cases abound. Was the "banal" affection syphilitic or parasyphilitic? It was, of course, syphilitic, although it bore both the characteristics of parasyphilis—viz., banality and refractoriness to specific treatment. The classical type of parasyphilis will, after all, be a scar left by some ulcerative syphilitic process—for instance, an ulcerative gumma. Here we have a lesion of undoubtedly syphilitic origin and possessing the qualities of banality and refractoriness to treatment. If one were to object that a scar cannot properly be called an "affection," it has to be remembered that the terms "affection," "stigma," and "lesion" are all through used promiscuously by Fournier. A scar certainly is a stigma, and intra-uterine amputation stumps or dental erosions are no more "affections" than scars are. But there seems no need for inventing an extra name for a scar left by a pathological process, nor can anything be gained by huddling together distinct pathological processes—as, for instance, pneumonia, corneal ulcer, &c., when due to the same cause, e.g., measles—under the denomination of parameasles.

With regard to the parasyphilitic affections following acquired syphilis I shall have to say only a few words. The connexion of tabes and general paralysis with syphilis seems to me established by carefully and critically sifted clinical evidence. Nothing of the kind can be said of any other parasyphilitic lesion attributed to the acquired disease, such as neurasthenia, hystero-neurasthenia, hysteria, epilepsy, &c. Of course, in a neurotic person syphilis may, and will, like any other disease, play the part of *agent provocateur*. In this way syphilis will be responsible for many manifestations of the variegated disease called neurasthenia. But so will gonorrhœa, or a cold, or any other complaint befalling a neurotic person. To give an idea of the degree to which syphilis may react on the mind and consequently on the nervous system Fournier cites the case of a young man who on being told that he had an indurated chancre immediately went home and hanged himself. Of course, suicide here seems parasyphilitic *par excellence*, although parasyphilis at a remarkably early stage. Its syphilitic origin is beyond doubt, it is eminently "banal" and past cure. A similar event has quite recently been reported by another eminent syphilographer in a case of gonorrhœa. It would seem odd to describe it as paragonorrhœal, yet there is apparently no reason why the frequent and profound disturbances of psychical functions following this disease, particularly in its chronic stage, should be treated differently from those caused by syphilis. In the new "Traité de Syphilis" by Fournier the functional disorders of the nervous system during the secondary stage are treated at considerable length. Here they are described as syphilitic and specific treatment is urgently recommended as the only and certain remedy. In his book on parasyphilis the identical nervous disorders are treated at the same length and the complete inefficacy of specific treatment is given as proof of their parasyphilitic nature. It seems that exactly the same nervous complaint during the same stage may, in his opinion, be either syphilitic or parasyphilitic, either only curable by specifics or not at all. That strange symptom boulimia, as a manifestation of syphilis, although by no means unknown in the country of beef-eaters, appears in the "Traité" as a syphilitic disease, the symptom of a "diathesis, which requires the treatment necessary for that diathesis and nothing more." In the work on "Parasyphilis" this very same boulimia appears (in a footnote) as a parasyphilitic affection the characteristic of which is not to yield to specific treatment. Evidently we are to understand that during the secondary stage of syphilis there is a boulimia syphilitic, and apart from it a boulimia parasyphilitic, both affections "banal," the one curable and curable by mercury alone, the other not amenable to mercurial treatment. Such incongruities are the natural outcome of the capricious principle underlying the whole division between syphilitic and parasyphilitic lesions.

The seed of parasyphilis has yielded a much richer harvest in hereditary than in acquired syphilis. If one looks at the list of parasyphilitic affections attributed to the influence of syphilis on the offspring one is at once struck by the variety of the pathological conditions which meet the eye. There are inflammatory processes, progressive degenerations, dystrophic conditions, dyscrasias, scars, tumours, predispositions, anything from a slight anomaly to monstrosity, from intellectual weakness to complete absence of the brain, from simple uncomplicated debility to "*la morte banale*," moreover moral defects, functional disorders, diatheses, &c. The method by which this ubiquity of syphilis is established is very simple. Every pathological condition which is "banal" and not rapidly and intensely benefited by mercury found in a heredo syphilitic subject (or one suspected of heredo syphilis for the reason that one of the parents or grand parents has at one time suffered from syphilis) is registered as parasyphilitic, and subsequently the cases are arranged under different pathological headings Of course in this manner a fairly large number of cases have been collected in which congenital syphilis or a history of acquired syphilis in parents or grandparents has been co existing with nearly every imaginable pathological condition But co existence is *not causal connexion, and the question of origin, to be* satisfactorily answered, requires much more subtle methods than compilation, enumeration, and registration

Here I wish to take up the thread where it was dropped at the last International Congress in Paris One of the subjects for general discussion there was the state of health of the descendants of parents who had themselves suffered from congenital syphilis Some time before the discussion took place Professor Jullien of Paris had addressed an appeal to all specialists, French and foreign asking for their personal *experience on the subject The result of this collective* investigation, although instigated by a member of the profession so widely known and so highly esteemed and on such an important occasion, has been a complete failure In the list of those who answered the appeal nearly all the foremost names of Europe and America were missing This fact alone is, I think, a certain indication that to the majority of our most experienced specialists the deleterious influence of syphilis on the third generation was an unknown quantity Of the 45 observations *sent in to Professor Jullien* 12 are *negative the* remaining 33 being mostly of such a shadowy nature that exposed to the searchlight of sound criticism they have to vanish into nothingness, the remaining few are open to more than one interpretation and—of course a most important point—are too small in number to prove any thing at all If syphilis had an appreciable effect on the third generation this would show itself in more than a handful of cases Some years ago I pointed out in a paper on the transmission of syphilis to the third generation the *extraordinary difficulties which lie in the way of proving* such transmission even if one limits oneself to syphilis proper Obviously the difficulties are increased a hundredfold

yphilitic" affections a
n the production of
be operative not even
to be guessed at in the present state of our knowledge The question put by the last International Congress has remained unanswered At present the value of parasyphilis as a means of retrospective diagnosis respecting the third generation is *nil*

Of course, there is more chance of attaining tangible results by setting the mark somewhat nearer and limiting oneself to the next generation I do not deny nor do I doubt, that several of the affections classed by Fournier as parasyphilitic are really of syphilitic origin For instance, there is scarcely any doubt o
being in no small number of
But why call them "parasyp
lish a distinction between
meningitis the one syphilitic, the other parasyphilitic as Fournier does? There is no need for any such division, either from a clinical or an anatomical point of view The more or less marked effect of mercury, the more or less "specific

domain of syphilis but I have met them in a case of undoubted congenital syphilis, in a set of teeth otherwise perfectly shaped and also in another equally certain case in which several subsequent children were affected in exactly the same manner I should be loth to call a stigma of such value and precision parasyphilitic and to class it with a pile of insignificant dental malformations to be met with every day and in every state of health Of course it is not amenable to specific treatment any more than the remains of any pathological process which has come to an end—as for instance, a scar Tabes and general paralysis also are as I said before in all probability closely related to syphilis and when met in children (a rare occurrence) strongly suggestive of hereditary taint Whether in the end they will turn out to be one and the same process only differing in localisation as many believe or whether they will have to remain two distinct maladies is still a matter of doubt I do

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call "heredo syphilitic,' whatever their "nature" may be, will undoubtedly allow a retrospective diagnosis, if not with absolute certainty, yet with more or less probability, according to the accompanying circumstances But with regard to the rest of this pathological medley—such as strabismus, hysteria, toothgaps cataract, giantism moral gaps, *astigmatism, headache* and such like—*even if they were* occasionally produced by parental syphilis, are utterly worthless for retrospective diagnosis as well as for prospective treatment Parasyphilis might be called a pathological lumber room there may be a few valuable pieces in it but the greater part is worthless

On the question of malformations as caused by syphilis I want to say a final word which to a greater or less extent
hilitic' lesions To
ilis and malforma-
of cases in which
the patient had congenital syphilis or his parents or grandparents a history of the acquired disease According to Fournier, out of 100 people in Paris "healthy or suffering from any disease whatsoever, there are always from 15 to 20 who are found to be actually suffering from syphilis' Making allowance for
times less common in women th
Fournier every second or third p
have 'a family history' if we go as far back as the third generation and about every fifth or sixth if we limit ourselves to the second generation This applies to everybody whether malformed or not What we want is the counter test—viz, how often is congenital syphilis or a history of acquired syphilis in the two preceding generations to be found in cases of such and such a malformation? And this question has to be put and answered for every individual malformation separately It is just this kind of evidence which is generally wanting Club foot is with a certain predilection given as an instance of a parasyphilitic malformation M Léon Courtillier has examined 54 cases with regard to previous diseases of parents grandparents, and their near relatives with the result that in *one case* only a history of syphilis in the parent (mother) was found This of course, proves that
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after family histories who try to prove the syphilitic origin of, say, pigment deposits on or near the optic disc solely by inquiring from parents or grandparents whether they had had syphilis If the grandfather answers in the affirmative and the mother has bad teeth or squints, a case of heredo para
the third generation will to some seem established
to "buckler falsehood with a
were caused by hereditary
find them with greater fre
quency where syphilis for several generations has been raging endemically The recent investigations of During in Asia Minor have proved nothing of the kind Likewise in rural districts, where syphilis is not as frequent as in Paris, its disfiguring influence on the offspring should be less On the other hand it is emphatically stated that the same malformations in man are produced by other agents such as alcohol tuberculosis nervosity (*la famille nevropathique*) acute infectious disease &c In these circumstances in order to demonstrate the syphilitic factor in the causation of these terata it would be indispensable to collect such cases in which these other factors can be eliminated with at *least some degree of probability* Nothing of the kind is even attempted The clumsy statement of occasional coincidence is offered as proof of causal connexion. It has to be granted that such an attempt would meet with nearly insuperable difficulties due to the practical impossibility of collecting sufficiently complete and reliable family histories extending over several generations and also to the co existence of several of these factors in nearly every individual case But even if this impracticable task could be accomplished for a number of cases with regard to the *different toxic agents*—even if we could exclude these sources of error—nothing much would be gained because the manifold causes of malformations are for the most part still buried in a "profound sea" of ignorance To "exclude'

what is hidden in its "unknown fathoms" is, of course, a matter of impossibility. The little which at present we dimly discern of these "secrets of the deep" is not such as to prop up any hypothesis which attributes a considerable share to toxic influences. The "strange issues" of animal birth are not less frequent in all those species which are unexposed to syphilitic or tuberculous infection or to alcoholic intoxication. Certainly they may have toxins of their own with regard to which we are "unobnoxious to be pain'd." Moreover, the "mechanics of evolution" have brought to light many interesting experimental facts regarding the mechanical causation of deviations from the normal course. Finally, phylogenetic reminiscences in ontogenetic evolution seem the foremost factor where the abnormal can be traced back to anterior or lower types. There is, perhaps, although it may sound paradoxical, a large physiological factor in the production of malformations which are commonly considered as pathological only. Anyhow, the whole question is of such extent and depth that it has to be looked upon from an elevated biological standpoint and not through the peephole of a speciality such as syphilography. We are standing just on the threshold of teratology, and we see that the causes which are operative in diverting embryonic development from its normal course are of infinite variety and complexity, for the most part at present beyond our power of conjecture or divination. We know that toxic influence is a factor which plays a part in it, but how large this part is, and whether the syphilitic poison is one which acts in this manner by intra-uterine intoxication, we do not know.

The inconsistency of the theoretical foundation of the whole doctrine is best illustrated by the practical conclusions drawn from it. We have been told that specific remedies either have no influence at all upon parasyphilitic affections or, if they have, "they act very slowly; in fact, their therapeutic action is *always incomplete and insufficient*." This was, in fact, one of the characteristics upon which the whole distinction was founded. Yet we are told in the end that experience is above theory and that it teaches us that specific treatment has *very often* cut short, palliated, and corrected, and even absolutely cured, certain syphilitic dystrophies, and in corroboration of this statement several cases are given in which the effect of specific treatment was not only *sufficient* but *complete*. I may be allowed to say that in this case it seems not to be the superiority of experience in general over theory in general, but the inferiority of this particular theory of parasyphilis which has to be held responsible for the contradictions to which it leads. If a theory is found to be diametrically opposed to practice the blame cannot be thrown on theory as an abstract while the theorist makes his escape. The theory of parasyphilis is bound to lead to direct opposition with facts, because the premisses upon which it is reared are fallacious and because it is based on a wrong notion of specificity.

Of course, it is out of the question to give general rules for the line of conduct to be followed with regard to treatment. A dental erosion, rickets, nævus, hydrocephalus, strabismus, tabes, hæmophilia, a predisposition to tuberculosis, &c.—all declared to be parasyphilitic conditions—will give different therapeutic indications. It therefore seems to me the crown-stone to the whole edifice of parasyphilis when Dr. E. Fournier gives general therapeutic rules—supposed to be binding, no matter what particular affection may be present in any individual case. As an example I give here the third of these therapeutic indications: "When a child is born where there is a previous history of syphilis in the parents, and who presents this or that stigma, the only thing to do is to place the parents under a prolonged anti-syphilitic treatment." When the parents are syphilitic mercurial treatment is certainly indicated "with the object of exercising a permanent influence on subsequent pregnancies." But it would seem exaggerated prudence to put both healthy parents on prolonged mercurial treatment merely because a child has bad teeth, or strabismus, or a nævus. On the other hand, meningitis or tabes may, perhaps, justify such a course. But in an *omnium gatherum* like parasyphilis it can never be a question of "this or that"—every fact has to be examined separately and to be treated according to its own merit. In like manner the question of treatment for the parasyphilitic himself will have to be answered according to the particular form of his parasyphilis. A case of parasyphilitic giantism, for instance, may without the least scruple be put on mercurial treatment with the object of reducing his size, likewise the corrective effect of the drug may be tried in cases of moral perversions of heredo-syphilitic origin, while in such parasyphilitic affections as congenital amputation, imperforate anus, double or triple tongue, &c., specific treatment will be of no avail.

The idea underlying the doctrine of parasyphilis is not new. Any specific disease may, and often does, lead to sequelæ void of all specificity in the same way as, to use Mr. Hutchinson's happy parallel, war may, and often does, lead to famine. Under different names, such as quaternary syphilis, pseudo-syphilis, post-syphilis, &c., exactly the same idea has at different times made its appearance in the history of syphilography. What is particularly new in the modern teaching of parasyphilis is, apart from the name, the enormous extension given to the deleterious and deteriorating influence of syphilis upon the race. With regard to this point I wish to give unmistakeable expression to my firm conviction that the modern doctrine of heredo-parasyphilis contains "one inch of discovery" to a "South Sea" of "invention."

A STATISTICAL INQUIRY INTO THE PROGNOSIS AND CURABILITY OF EPILEPSY; BASED UPON THE RESULTS OF TREATMENT.[1]

By WILLIAM ALDREN TURNER, M.D. EDIN., F.R.C.P. LOND.,

PHYSICIAN TO OUT-PATIENTS, THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, QUEEN-SQUARE, AND TO KING'S COLLEGE HOSPITAL.

Introduction.—Much attention has been given from classical times onwards to the prognosis of epilepsy. It would, however, serve no useful purpose to refer to the numerous authorities on this disease, or even briefly to state their conclusions. An exception ought, however, to be made in the case of Hippocrates, in whose writings will be found much that is of value even at the present time. For example, when describing the "Sacred Disease" he wrote:[2] "If it attacks little children the greater number die. ..... If youths and young adults, recovery may take place, but there is danger of its becoming habitual, and even increasing if not treated by suitable remedies. Such also is the case when it attacks children. ...... When it attacks people of advanced years it often proves fatal. ...... When a person has passed the twentieth year of his life the disease is not apt to seize him, unless it has become habitual from childhood. ...... When the disease has prevailed for a length of time it is no longer curable." It would appear, however, as if the ancient Greek and Roman physicians took a more generally favourable view of the disease than has been the custom, in more recent times. The essentially gloomy view of the prognosis which has attended the study and treatment of the malady up to the present time may be largely ascribed to the writings of the French physicians in the earlier decades of the last century. Gloomy indeed is the general impression obtained *from the* writings of Maisonneuve (1803), Pinel (1818), Esquirol (1838), Valleix (1851), and others. More cheerful are the results recorded by such writers as Herpin (1852) and Trousseau (1861) in France and Russell Reynolds (1861) in this country, who corroborate the opinion expressed by one of the earliest of the French authors, Tissot (1778–80), who almost alone in the eighteenth century stated that he had cured a great number of epileptics and believed that much could be done towards the arrest of the malady.

A few statistics on the subject may be given here with a view of showing the variability existing between the results obtained by treatment at different periods. In the pre-bromide days it is interesting to recall the high percentage of so-called cures which have been recorded; thus Hufeland[3] stated that a cure was effected in 5 per cent. Russell Reynolds[4] noted that 10 per cent. of his cases.

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[1] A paper read before the Royal *Medical and* Chirurgical Society on June 9th, 1903.

[2] Sydenham Society's translation, vol. ii., pp. 850 et seq.

[3] H[illegible] 1841.

[4] I. [illegible] 361.

of his cases were cured; Trousseau obtained 20 cures out of 150 cases, or 13 per cent.; and Herpin[5] was perhaps justified in his sanguine belief when he recorded 19 cures out of 38 cases, or 50 per cent. These are the results recorded by physicians who used remedies (such as oxide of zinc and nitrate of silver) which have *long ago* passed out of present-day practice. The almost universal administration of bromides, since their introduction in 1857 in the treatment of this disease, has in no way affected the variability in the results obtained. To mention a few instances: Nothnagel gives from 4 to 5 per cent. of cures, Laehr gives 6 per cent., Ackermann gives 7·6 per cent., Dana[6] gives from 5 to 10 per cent., Wildermuth gives 8·5 per cent., Habermaas[7] gives 10·3 per cent., and Alt gives 12·5 per cent. It must be evident that some explanation ought to be forthcoming as to the difference existing between the statistics of recent authors upon the results obtained before and since the introduction of the bromide treatment. First, some proportion of the existing difference is accounted for by the greater precision exercised in diagnosis, the later authors excluding all cases from their statistics of symptomatic epilepsy, or epilepsy arising from organic cerebral or meningeal disease, and of hystero-epilepsy. It is within the knowledge of most neurologists that the prognosis of symptomatic epilepsy is more favourable than that of true epilepsy, but an obvious proof of this fact may be found on perusal of Reynolds's[8] figures, which show 10 per cent. of cures in the idiopathic disease and 43 per cent. in that due to organic cerebral disorders. Secondly, much of the discrepancy existing in statistics depends upon the definition of a cure, the interpretation differing widely in nearly every writer's statements. Reynolds regarded only those cases as cured in which there had been perfect restoration to health during a period of at least four, or at most eight, years after cessation of the seizures; but many authors fail to state in their writings what is their definition of cure or recovery from epilepsy, and in the majority of instances so-called cures are merely long remissions occurring spontaneously or induced by suitable medicinal remedies. It would seem to be obvious from Voison's statement that Herpin's were really cases of permanent cure, for he observed many of these patients 10 years after Herpin's death and found them free from fits.[9]

The statistics.—It has been thought advisable that the *records of the out-patient department of the National Hospital* for the Paralysed and Epileptic, which contain an enormous amount of valuable information in this connexion, [illegible] with a view to collecting [illegible] any years in the treatment [illegible] of the bromides and the [illegible] I am therefore greatly indebted to my colleagues in the out-patient department of the hospital for permission to refer to their case records and to add them to those which have been under my own observation. A few cases have also been obtained from private sources. I have reserved for special consideration in a further communication the cases which have come under care and treatment at the Colony for Epileptics, Chalfont St. Peter, amounting to about 200 in number. The reason for this separation is obvious, in that those cases which eventually find their way into this and similar institutions have previously to their admission been under various forms of medicinal treatment, from which they have received no permanent benefit, and have become in the majority of instances confirmed epileptics. The hospital cases, on the other hand, are mainly early examples of the disease, with little or no mental impairment, and are perfectly capable of continuing their schooling or attending to their several occupations.

In analysing the cases certain guiding principles were laid down and the following eliminations were made: (1) all cases which had not been under constant observation and treatment for a period of at least two years; (2) all cases which showed any co-existing complication, such as hemiplegia, albuminuria, or gross cerebral lesion; and (3) all cases of pronounced idiocy or dementia. By observing these restrictions cases of so-called idiopathic epilepsy were as far as possible obtained, while any transitory amelioration resulting from medicinal or other treatment was checked by *fixing the minimum period of observation at two years.* In the study of the cases the statistical method has been adopted and the results have been recorded in percentages, the total number of cases used in the construction of each table being also given. Although many objections may be urged against such a method it has been deemed to be the best available, while the results, as will be seen later, show a surprising uniformity when considered from various points of view. The total number of cases used in the investigation is 366. Of these 355 are from the records of the out-patient department of the Hospital for the Paralysed and Epileptic, while only 11 are from private sources. By far the larger proportion are out-patient hospital cases, a fact of practical importance when we consider how large a part the ordinary conditions of life, such as diet, habits, and general environment, play in modifying a disease like epilepsy. The cases have been subdivided into three groups according as they have responded, successfully or unsuccessfully, to treatment.

TABLE I., *giving the Total Number of Cases and the General Result of Treatment.*

Cases of arrest	86	Observed over nine years ...	38
Cases showing improvement	105	„ „ ...	43
Confirmed cases	175	„ „ ...	68
Total	366	Total	147

The term *arrest* has been used at the outset advisedly in preference to *cure*, owing to the uncertainty in defining the latter term. No case has been regarded as arrested which has not been free from fits for a period of at least two years. The cases classified as *improved* are those which have responded, more or less satisfactorily, to treatment. Under this heading are also included those cases in which a remission, sometimes for a number of years, has occurred, but in which a relapse has eventually taken place. *Con-* [illegible] steady tendency, [illegible] mental deteriora- [illegible] the frequency or the severity of the seizures. In the second column of the table is given the number of cases which were observed for a period of nine years or more. The importance of this column will be seen in a subsequent part of the paper. Of the total of 366 cases no less than 86 showed an arrest of the seizures over periods varying from two and a half to 25 years. The majority of these continued the bromide treatment during the whole period of arrest, so that, with few exceptions, the amelioration cannot be described as other than arrest during the administration of the bromides. In all cases, owing to the patient passing from under observation after a number of years, no further record has been obtainable. It is, however, no uncommon thing to meet with a past history of this disease in adults and elderly people suffering from symptoms of nervous debility and neurasthenia, who give an account of having many years before been subject to attacks of an epileptic nature and of which they have been cured. Two instances of this may be given.

CASE 1.—A man, when 18 years of age, had an epileptic fit. This was followed by two more attacks during the next 18 months. He was kept upon bromide treatment for four years and as there was no recurrence of the fits the medicine was stopped. 15 years later, when aged 35 years, he came under treatment for general neurasthenic symptoms, having had no relapse of the epileptic attacks.

CASE 2.—An unmarried woman had a number of epileptic fits between the ages of 28 and 32 years. She was under treatment by bromides for one year only. 22 years later, when 54 years of age, she came under observation for headache and nervousness, having had no further attacks of epilepsy since she was 32 years of age. During this period she had no treatment of any kind.

The subjoined table (Table II.) gives the total number of cases in which arrest took place and the length of time during which no fits were noticed, the bromides being all the while administered, except where stated to the contrary.

As it is highly desirable to ascertain how far epilepsy is a disease which may be arrested, improved, or become confirmed, it is proposed to study the cases which have been collected and the influence of treatment upon them under various headings, so as to define, as far as possible, the specific factors upon which a prognosis may be based. The method adopted in this paper is one of percentages, the

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[5] Herpin: Du Pronostic, &c., 1852.

[6] Dana: Text book, 1893.

[7] Habermaas: Allgemeine Zeitschrift für Psychiatrie, vol. lviii., p. 243, from which the other references are taken.

[8] Russell Reynolds: Epilepsy, London, 1861.

[9] Mentioned by Nothnagel, Ziemssen's Encyclopädie, vol. xiv., 1873.

TABLE II., *giving the Number of Cases in which Arrest took place and their Duration.*

11	cases	of arrest	of from	2 to 3	years'	duration.
18	,,	,,	,,	3 ,, 4	,,	,,
10	,,	,,	,,	4 ,, 5	,,	,,
11	,,	,,	,,	5 ,, 6	,,	,,
5	,,	,,	,,	6 ,, 7	,,	,,
8	,,	,,	,,	7 ,, 8	,,	,,
8	,,	,,	,,	8 ,, 9	,,	,,
4	,,	,,	,,	9 ,, 10	,,	,,
5	,,	,,	,,	10 ,, 11	,,	,,
2	,,	,,		11	,,	,,
*2	,,	,,		15	,,	,,
*1	,,	,,		22	,,	,,
1	,,	,,		25	,,	,,
86						

* Without bromides.

total number of cases in the several tables showing slight variations, according as the information supplied by the notes threw light upon the points specially under investigation. The prognostic bearing and value of the following influences will therefore receive separate consideration.

Conditions influencing prognosis.—The prognosis of epilepsy and the conditions which influence it will be discussed in detail. It is proposed to deal with this subject under the following headings: (1) the influence of a hereditary disposition; (2) the influence of age at the onset of the disease; (3) the duration of the disease; (4) the frequency of the seizures; (5) the character and time of the seizures; (6) the influence of marriage; (7) the influence of pregnancy, parturition, and the puerperium; (8) the influence of sex; (9) the influence of the catamenia; and (10) the influence of accidental factors. After the above have received consideration on the basis of the collected cases, attention will be directed to certain types of epilepsy which have an influence on the prognosis, and also to the important subject of long remissions in epilepsy and their bearing upon the cure of the disease.

1. *The influence of a hereditary disposition.*—For the purposes of this investigation a family predisposition to epilepsy only—i.e., a similar heredity—has been noted. The influence of the neuroses, such as chorea, migraine, alcoholism, and insanity, has been for the present purpose omitted from the statistics.

TABLE III., *giving the Total Number of Cases in which this point was investigated.*

—	Arrests.	Improved.	Confirmed.	Total.
Epilepsy on mother's side	16	16	18	50
Epilepsy on father's side	12	11	14	37
No known heredity to epilepsy	42	59	24	125
No note of heredity	12	19	119	150
Total	—	—	—	362

In Table III. a total of 362 cases has been analysed; of these 150 may be eliminated, as there was no note either for or against any hereditary predisposition. Of the remainder there was a clear family history of epilepsy in 87, while the existence of this disease in the family was unknown to the patient or the relatives in 125. The malady was slightly more common upon the mother's side than upon the father's side.

TABLE IV., *giving the Percentage of Hereditary and Non-hereditary Cases.*

—	Arrests. Per cent	Improved. Per cent.	Confirmed. Per cent.	Total cases.
With hereditary history	32 0	31·0	36 0	87
Without hereditary history	33 6	47·2	19 2	125
Total	—	—	—	212

From Table IV. it is seen that there is practically the same percentage of arrests in those with as in those without a hereditary history, the latter, moreover, showing a greater percentage of improved cases and a decidedly smaller percentage of cases which eventually became confirmed.

The general prognostic conclusions which may be drawn from these cases are: (*a*) That there is as great a chance of arrest of epileptic fits in those who have as in those who have not a known family history of epilepsy. (*b*) In those who have a hereditary history the chances as to whether the fits become arrested, improved, or confirmed are in any given case about equal. (*c*) That as regards general improvement more is to be expected in those who have no hereditary disposition. (*d*) On the other hand, a considerably smaller percentage of confirmed epileptics is to be found amongst those who have no family predisposition to the disease

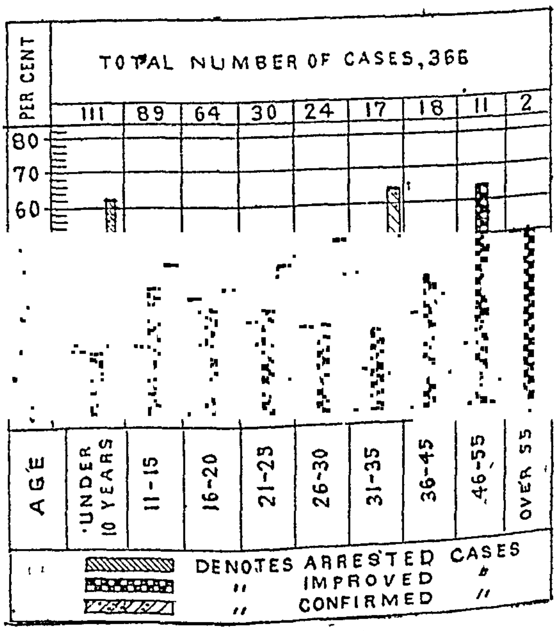
2. *The influence of age at the onset of the disease*.—In the subjoined table the percentages are given in the middle columns, the total numbers being stated in the last

TABLE V., *showing the Age Percentage at the Onset of the Fits.*

Age at onset.	Arrests. Per cent.	Improved. Per cent.	Confirmed. Per cent.	Total cases.
Under 10 years ...	19 8	18 0	62 0	111
11 to 15 ,, ...	20 0	35 9	43 8	89
16 ,, 20 ,, ...	34 3	29 6	35 9	64
21 ,, 25 ,, ...	26·6	30 0	43 0	30
26 ,, 30 ,, ...	25·0	25·0	50 0	24
31 ,, 35 ,, ...	11·7	23·5	64·7	17
36 ,, 45 ,, ...	27 7	38·8	33·3	18
46 ,, 55 ,, ...	18 1	63·6	9·0	11
Over 55 ,, ...	50 0	50·0	—	2
Total	—	—	—	366

The accompanying chart (Chart 1) is of especial value as it shows that the age at the onset of the disease is particularly important in considering the prognosis. In order to facilitate the comprehension of the figures in Table V. the following graphic method has been adopted.

CHART 1.



Showing influence of age at onset.

The main conclusions to be derived from a perusal of the above may be stated as follows: (*a*) Epilepsy commencing under ten years of age is least favourable as regards arrest or improvement and most favourable for the production of confirmed cases. (*b*) Those cases in which the onset of the disease is between 16 and 20 years of age show the greatest percentage of arrests and the lowest percentage of confirmed cases. From this quinquennial period onwards to that of 31 to 35 there is a steady diminution in the percentage of arrests and a progressive increase in the percentage of confirmed cases. The chief point of practical importance to be deduced from these figures, if put in general terms, is that epilepsy arising during puberty is essentially a tractable disorder, while that of adolescence is resistance to treatment These facts and figures confirm in a striking manner the opinion of Hippocrates who wrote: "Epilepsy which commences about puberty is susceptible to cure, while that which comes on after 25 years of age as a rule only terminates with the patient."[10] (c) From that arising during the quinquennial period from 31 to 35 years (which provides the least tractable form of epilepsy, except perhaps that commencing under 10 years of age) there is a steady diminution in the number of cases which become confirmed, so much so that of those cases which arose during the decennial period from 46 to 55 years only 9 per cent. became confirmed epileptics. (d) Epilepsy arising over 55 years of age, to which the name of senile epilepsy has been applied by some writers, is essentially a tractable disorder.

3. *The influence of the duration of the disease.*—In the two following tables the duration of the malady is considered, the percentage frequency being given in the middle columns and the total number of cases in the last. The term "duration" signifies the course of the disease from its commencement until the patient came under regular observation and treatment at the hospital, from which time there dated either arrest of the fits, improvement, or a steady downward deterioration.

TABLE VI., *giving the Duration Percentage of the Disease up to the Commencement of Treatment and the General Result of Treatment.*

Duration.	Arrests. Per cent.	Improved. Per cent.	Confirmed Per cent.	Total cases.
10 years and under	23·5	32·3	41·1	272
11 to 20 years	25·8	19·3	54·8	62
21 ,, 30 ,, ...	12·5	20·8	66·6	24
31 ,, 40 ,, ...	20·0	—	80·0	5
Over 40 ,, ...	50·0	—	50·0	2
Total	—	—	—	365

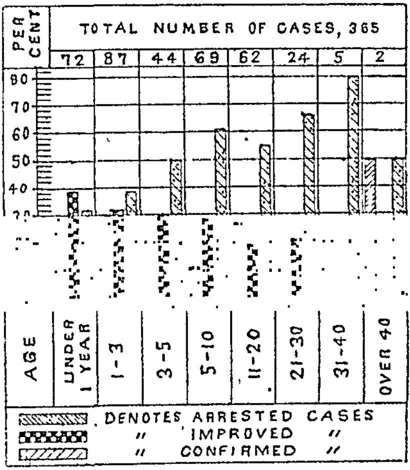
Table VI. shows, by division into decennial periods, that there is as great a percentage of arrests when the disease has lasted from 11 to 20 years as from one to 10 years, but that under 10 years the percentage of improved cases is greater and there is less tendency for the disease to become confirmed. But as 10 years is a considerably prolonged period, and as the majority of epileptics come under observation and treatment before so long a time has elapsed, it is important to ascertain the percentage frequency for periods short of 10 years, and this has been done in Table VII.:—

TABLE VII., *giving the Percentage Frequency in Four Unequal Periods under 10 Years of Age.*

Duration.	Arrests. Per cent.	Improved. Per cent.	Confirmed. Per cent.	Total cases.
Under 1 year	29·1	38·8	31·9	72
1 to 3 years	29·8	32·1	39·0	87
3 ,, 5 ,, ...	20·4	29·5	50·0	44
5 ,, 10 ,, ...	11·5	27·8	60·8	69
Total	—	—	—	272

Some general conclusions may be drawn from a perusal of the tables, as well as from a study of the subjoined chart (Chart 2), which gives in a graphic form the percentage results already detailed. (a) Speaking in general terms the earlier a case is brought under systematic treatment the more hopeful the prognosis and the greater the probability of improvement. (b) That there is a greater prospect of arrest or improvement during the first five than during the second five years of the disease. (c) Arrest of the fits, however, may take place in cases even after a duration of from 20 to 30 years. After 30 years arrest is possible, but the fewness of the cases hardly allows of any definite conclusions. (d) There is a progressive tendency for epilepsy to become confirmed the longer the disease lasts without definite treatment.

CHART 2.



Showing duration percentage.

A comparison may now usefully be made between Tables V. and VII., which show respectively the age and duration percentages, and the following table (Table VIII.), which shows the age periods at which arrest most commonly took place.

TABLE VIII., *showing the Age Periods at which Arrest took place in 86 Cases.*

Under 10 years of age	6 cases, or	6·9 per cent.
From 11 to 15 years of age	8 ,,	9·2 ,,
,, 16 ,, 20 ,, ,, ...	15 ,,	17·4 ,,
,, 21 ,, 25 ,, ,, ...	17 ,,	19·7 ,,
,, 26 ,, 30 ,, ,, ...	9 ,,	10·4 ,,
,, 31 ,, 35 ,, ,, ...	8 ,,	9·2 ,,
,, 36 ,, 40 ,, ,, ...	7 ,,	8·0 ,,
,, 41 ,, 45 ,, ,, ...	7 ,,	8·0 ,,
,, 46 ,, 50 ,, ,, ...	4 ,,	4·6 ,,
Over 50 years	4 ,,	4·6 ,,
A doubtful case	1	
Total	86	

From these tables it is obvious that the decade 16 to 25 presents the greatest number of arrests; in other words, more arrests are likely to take place during the latter part of that decade, in the earlier part of which the onset of true epilepsy is most common—that is to say, the quinquennial period 16 to 20, in which the disease most usually declares itself, is succeeded by the quinquennial period 21 to 25, in which arrest is most frequent. This observation would corroborate the interpretation put upon the figures given in Tables VI. and VII., from which it is clear that epileptic fits are more prone to arrest during the first three or five years following their onset.

4. *The frequency of the seizures.*—The relative or average frequency of the attacks has an important bearing upon the prognostic outlook, as will be readily seen from Table IX.

The general conclusion may be drawn that the longer the interval between the attacks the greater the prospect of arrest or improvement. Very infrequent attacks are eminently favourable. Attacks which occur every three or four months, or once or twice a year, are—within certain

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[10] Aphorisms, Section 5, No. vii. The aphorism is rendered in the Sydenham Society's translation, vol. ii., p. 738, as follows: "Those cases of epilepsy which come on before puberty may undergo a change, but those which come on after 25 years of age for the most part terminate in death."

TABLE IX., *giving the Percentage Frequency of the Attacks.*

Frequency.	Arrests. Per cent.	Improved. Per cent.	Confirmed. Per cent.	Total cases.
Daily (1 or more) ...	—	42·5	57·5	40
Weekly (1 or 2) ...	12·5	23·9	63·5	96
Monthly (1 or 2) ...	22·9	31·2	45·8	96
Quarterly (1 or 2) ...	36·9	24·6	38·4	65
Yearly (1 or 2)... ...	42·1	47·3	10·5	19
Total	—	—	—	316

limits and when considered in association with the points already mentioned in previous paragraphs—of more satisfactory prognostic importance than those which may be counted by the month, the week, or the day. The greatest percentage of confirmed cases and the smallest percentage of arrested cases are seen from the above table to occur in those epileptics who are subject to daily and weekly attacks, and the converse also holds good in that the smallest percentage of confirmed and the highest of arrested cases are found amongst those epileptics whose fits occur so infrequently as once or twice a year.

5. *The character and time of the seizures.*—The kind of attack to some extent modifies the prognosis. It is a matter of common knowledge that the major attacks are more readily influenced by drugs than the minor seizures. Owing to the incompleteness of the notes in describing the exact character of the fits it has been found impossible to construct a table of any real value, but so far as information has been supplied it is clear that the greatest percentage of arrests is to be found in cases of grand mal (49 per cent. out of a total of 96 cases); then follow the cases of combined grand and petit mal (35 per cent. out of a total of 56 cases); and lastly, petit mal occurring alone (26 per cent. out of a total of 15 cases). So also with regard to the time-incidence of the seizures. Those occurring by day only—including in this the very common early morning seizure—give a greater percentage of arrests (51·9 per cent. out of a total of 52 cases) than those occurring only during sleep (34 per cent. out of a total of 35 cases). Combined day and night attacks give also an arrest percentage of 34 per cent. out of a total of 35 cases.

6. *The influence of marriage.*—There would appear to be no real foundation for the popular belief that marriage predisposes towards cure, or even amelioration, of epileptic seizures. On the contrary, the consequences of matrimony tend to the production of circumstances distinctly unfavourable to the arrest or alleviation of the disease. Of 13 cases in which the disease was specially observed in its relation to marriage (all being women), five stated that they observed no change at all either in the frequency or the character of their fits; five appear to have slightly improved, in one of whom the improvement was only temporary; of the remaining three, one had her first seizure on the night of her marriage, another developed epilepsy seven months after marriage, while the third case seems to have been distinctly affected for the worse by marriage. These observations are in general harmony with what has been stated by other writers—namely, that there is no constancy in the influence of marriage upon the seizures.[11] The influence of marriage upon the transmission of the disease is a subject which scarcely comes within the scope of this paper, but some facts bearing upon it are incidentally mentioned and will be here briefly stated.

CASE 3.—A married woman, suffering from epilepsy, whose maternal grandfather had fits, bore six children, all of whom died from convulsions in infancy.

CASE 4.—Two epileptics, husband and wife, had six children. Three daughters and a son were well and without fits. Two other daughters, aged 16 and 18 years, developed fits when they were respectively 13 and 14 years old.

CASE 5.—A married epileptic woman, without any known heredity to the disease, had ten children, the eldest of whom was 37 and the youngest 20 years old. None of them had convulsions or fits.

CASE 6.—A married epileptic woman, whose two brothers also had fits, had a daughter who was also an epileptic.

CASE 7.—An epileptic man, without any known heredity, had ten children, the youngest of whom was 36 years of age. None of them had fits.

CASE 8.—An epileptic man without heredity, who had fits from 16 to 69 years of age, had two children, neither of whom had fits.

CASE 9.—A married epileptic woman had two children without fits, but both of them had an attack of chorea.

The above form only a small number of cases, but one fact stands out—namely, that of the three parents in whose family there was no known history of epilepsy, epileptic fits had not appeared in the children; that in the two cases in which the disease was obviously hereditary fits or convulsions were present in the offspring; and that in the case in which both parents were epileptic two out of six children developed epilepsy.

7. *The influence of pregnancy, parturition, and the puerperium.*—The influence of pregnancy has been noted in 20 cases. Of these, nine were free from seizures during this period, one patient stating that her longest free intervals occurred when she was in this condition. Of the remainder, seven were invariably worse when pregnant, two had fits only at or about the time of quickening, and one never observed any difference either in the frequency or character of the fits. In another case, in which the fits were arrested by bromides for a long time, an intercurrent pregnancy and subsequent puerperium intervened without any symptoms of epileptic seizures. It may therefore be concluded that gestation has little, if any, influence upon the disease. At the best there may only be a temporary respite; but pregnancy is the forerunner of the *puerperium*, a period which is especially prone to epileptic attacks. Of 19 cases in which this state was noted all gave a history of one or more severe attacks within a short period, usually a few days after the birth of the child. In two of the cases the onset of the disease was observed after the birth of the first baby and in one after the birth of the fourth child. *Lactation* would seem in some cases to be peculiarly favourable for the occurrence of fits. In one case the fits only came on during the period of suckling and this happened after three successive pregnancies. On weaning the fits disappeared. In a second case the first fit arose while nursing the first baby four months after confinement. From the above facts it would appear as if there were three periods when epileptic fits were prone to develop—at quickening, during the first few days of the puerperium, and during lactation.

8. *The influence of sex.*—Sex plays little part in the prognosis of epilepsy. The following table (Table X.) will show the percentage of arrested, improved, and confirmed cases in this relation. From this it is seen that rather more males show arrest of the seizures, but at the same time this sex gives a greater percentage of confirmed cases.

TABLE X., *showing the Sex Percentage of Arrested, Improved, and Confirmed Cases.*

	Arrests. Per cent.	Improved Per cent.	Confirmed. Per cent.	Total cases.
Males...	26	22	51	179
Females	20	34	44	187
Total	—	—	—	366

These results are in harmony with those of several previous observers (Reynolds, Gowers, and others), but are in opposition to the statement of Herpin.

9 *The influence of the catamenia.*—Menstruation would appear to exert little influence upon the prognosis of epilepsy. The popular belief that the satisfactory and regular establishment of this function will arrest or ameliorate the disease has no scientific basis. The onset of epileptic fits during puberty is not uncommonly accompanied by irregularity in the menstrual periods, but it is rare to find any amelioration in the frequency or severity of the attacks when the period becomes regularly established. It will be seen that amenorrhœa induced physiologically by pregnancy may or may not have any beneficial effect. There were some cases also in which the fits became arrested at or about the climacteric period, but the evidence is too small to state definitely that this is an epoch at

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[11] On this point see some statistics collected by A. Hughes Bennett, Brit. Med. Jour., March, 1879.

which spontaneous arrest may be expected. A reference to Table VIII. will show that 8 per cent. of the cases were arrested between the ages of 41 and 45 years, but only three of these were women. There was one patient, however, who seemed to lose her fits when she was subject to amenorrhœa, from which she occasionally suffered for prolonged periods. During these periods she was invariably free from attacks, which reappeared when the catamenia were established.

10. *The influence of accidental factors.*—A few words may be said upon the influence of accidental factors in relation to the production of epileptic fits. In two cases an intercurrent attack of pneumonia was noted. In one, although several seizures occurred during the course of the pulmonary inflammation, a respite from fits was subsequently obtained lasting for several months. In another, during a long spell of freedom from fits an attack of pneumonia brought about a temporary return of the seizures. In another patient an attack of chorea was followed by a year's freedom from fits. In another an attack of scarlet fever greatly increased the number and severity of the epileptic seizures. In another case a long interval of freedom was broken by the patient receiving a severe blow upon the head. In a case of epilepsy the gradual onset of paralysis agitans made no difference to the pre-existing disease. As a rule an attack of acute febrile disorder gives a subsequent temporary respite from fits, with the exception of scarlet fever, a fact which has also been noted by Gowers. On the other hand, the *onset* of an acute pneumonia may be accompanied by severe seizures or by a temporary relapse during a remission from fits. Injuries, such as blows upon the head, aggravate the disease, an observation which is in harmony with what occurs in other chronic nervous disorders. No prolonged relief from epileptic fits can therefore be predicted after the occurrence of an acute inflammatory disorder.

Types of epilepsy.—Even a brief acquaintance with epileptics will show that there is a marked periodicity in the occurrence of the seizures, which is highly characteristic of the disease. The intervals are of varying duration—a day, a week, two weeks, a month, two or three months, a year, or longer. These intervals are, however, not absolutely regular, considerable variability and irregularity being observed on charts specially kept for recording the time periodicity of epileptic fits. Such, indeed, is the common incidence of attacks; but attention has been directed by Biro[12] to certain types of cases which have apparently some bearing on prognosis. These types have been called "increasing" or "decreasing," and some examples will be given to illustrate their characteristics. The types may be described either by the number of fits per month or per year, in increasing or decreasing numbers, or by the number of years or months intervening between the seizures. The following cases may be taken as illustrative of the types. Cases 10, 11, and 12 are of the increasing type; Cases 13, 14, and 15 are of the decreasing type; and Cases 16 and 17 are blended increasing and decreasing types.

CASE 10.—In this patient fits commenced at 15 years of age. Three fits occurred in the first year (without treatment); four in the second year (under bromides); nine in the third year (under bromides); and ten in the fourth year (under bromides) After this the patient ceased attending. It is seen that the fits went on increasing, notwithstanding the continuance of treatment.

CASE 11.—This patient had the first fit when five years of age, the second when 11, the third when 19, the fourth when 20, and the fifth and sixth when 21. He was then put under bromide treatment and has had no fits for eight years.

CASE 12.—In this patient fits commenced at [illegible] years of age. [illegible] about [illegible] fit in December, 1897; interval of two years; two fits in January, 1900; interval of one year; two fits in 1901; three fits in 1902; since which date there has been no further observation.

CASE 13.—In this patient fits commenced at 39 years of age. During the first year of bromide treatment the patient had several attacks; the second year, four; the third year, one; the fourth year, two; the fifth year, one attack; and the sixth, seventh, eighth, and ninth years, none.

CASE 14.—In this patient fits commenced at 21 years of age. During the first year of treatment the patient had 12 or more fits; the second year, 12; the third year, 12; the fourth year, three; the fifth year, four; the sixth year, two; and the seventh, eighth, and ninth years, none.

CASE 15.—This patient came under treatment at 19 years of age, having a fit every two or three weeks. During the first year of treatment he had about 12 fits; the second year, several; the third year, eight; the fourth year, four; the fifth year, one fit; and the sixth year, none.

The two types, as above described, may, upon the other hand, be found blended in the same case; for example, one of increasing character may as the result of treatment be changed into the decreasing type and of this description are the two following cases.

CASE 16.—In this patient the first fit occurred at 12 years of age, the second after eight years' interval, the third after five, the fourth after five, the fifth after two, and a batch of three fits after three. He then came under regular bromide treatment and had two fits in the next year, three in each of the two following years, five in the next year, one fit a year later, and none in the next three years.

CASE 17.—When aged 25 years, in 1882, this patient had his first fit, in 1884 his second, from 1884 to 1887 he was free from attacks, from 1887 to 1890 he had several, in 1891 four, in 1892 11, in 1893-94 eight, in 1895 six, in 1896 three, in 1897-98 none, in 1899 one very slight, and in 1900-01 none.

The above-recorded cases, although symbolic of the types referred to, are rarely met in such purity. Their prognostic importance may be briefly stated as follows: (1) In the increasing type, as shown in Cases 10 and 12, the fits through a natural inclination to [illegible] spite of treatment. On [illegible] unfavourable for arrest, [illegible] type is more commonly induced by treatment and if clearly established has a favourable outlook.

Long remissions in epilepsy.—It is well known that remissions are a frequent, if not a characteristic, feature of this disease. The common remission which takes place during childhood in those patients whose fits commence in infancy, then cease for a time and recur at or about the time of puberty, is one of the most remarkable features of this disorder. An interval of several years not infrequently occurs between the first and second attacks, while numerous instances may be cited in which periods of five, ten, or 15 years have been known to elapse between epileptic seizures. Wharton Sinkler[13] records a remission of 29 years in one of his cases. An examination of the present series reveals a number of instances in which remissions have been observed and which have persisted for a number of years, but which have been succeeded by a return of the characteristic seizures. In the cases in which *arrest* is stated to have occurred, freedom from fits was noted over periods varying from two to 25 years (these have not been included in the present table), but in Table XI. will be found the list of cases which show *remissions* lasting for more than two years, with subsequent relapse.

TABLE XI., *showing the Cases of Remission and their Duration.*

Remission	of from	2 to 3	years	observed in	1 case.
"	"	3 " 4	"	"	2 cases.
"	"	4 " 5	"	"	4 "
"	"	5 " 6	"	"	2 "
"	"	6 " 7	"	"	2 "
"	"	7 " 8	"	"	1 case.
"	"	15	"	"	1 "

[illegible] the remission occurred during the adminis-[illegible] of them the fits returned, not-[illegible] the drug. [illegible] ion of such cases that most information may be gleaned with reference to the possibility of a cure of epilepsy it will be instructive to study some of them with greater detail. In one case there were two periods of remission, one lasting for three and a half years without any remedies having been given and the other for four years under bromide treatment. The fits eventually recurred with symptoms of automatism and violence. In another an interval of six years of freedom was succeeded by a return of fits in increasing frequency. In a third there were two remissions, one of three years and a second of five years, to be followed by fits occurring about every month. In another an apparent arrest for seven years was broken by two fits during an attack of acute pneumonia. In the patient remission of whose seizures lasted for 15 years the relapse was characterised by the occurrence of petit mal. It should be pointed out that in all the above cases the disease had been fully established for some years and that the intervals therefore do not correspond to the prolonged periods sometimes found between the first and second fits to which reference has already been made. Two points especially call for notice in this connexion: on the one hand, long remissions may occur under the administration of bromides to be followed by a relapse when the drug is omitted; and on the other hand, a remission of long duration may be broken by accidental circumstances, such as a blow on the head, a fall, childbirth, or an acute inflammatory disorder. Hence it is apparent that long periods of arrest, though as a rule indicating a favourable prognosis, are not synonymous with a cure of the disease. The question may therefore now be asked—

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[12] Biro: Deutsche Zeitschrift für Nervenheilkunde, vol. xxiii., p. 40.

[13] Wharton Sinkler: Journal of Nervous and Mental Disease, [illegible], p. 601.

Is there a cure of epilepsy?—This question may in general terms be answered in the affirmative. Two cases (Cases 1 and 2) have been already mentioned in which this occurred and not a few instances may be gathered from amongst epileptics and neurasthenics who state that they suffered from fits in earlier years, and if the later histories of epileptics could be traced many more instances might no doubt be added. Although writers are generally agreed as to a cure of epilepsy there is a less general consensus of opinion as to what is the definition of a cure—that is to say, after what period of arrest a "cure" may be said to have taken place.[14] Before attempting to answer this question it is necessary to refer again to a few points to which attention has already been directed. With this object in view, Tables II. and XI, dealing especially with the cases of arrest and long remission, are blended and reproduced side by side in Table XII., which gives the number and duration of the cases of arrest and remission:—

TABLE XII., *giving the Cases of Arrest and Remission with the Duration.*

11	cases of arrest,	1	of remission,	from	2	to	3	years' duration.
18	,, ,,	2	,,	,,	3	,,	4	,, ,,
10	,, ,,	4	,,	,,	4	,,	5	,, ,,
11	,, ,,	2	,,	,,	5	,,	6	,, ,,
5	,, ,,	2	,,	,,	6	,,	7	,, ,,
8	,, ,,	1	,,	,,	7	,,	8	,, ,,
8	,, ,,	0	,,	,,	8	,,	9	,, ,,
4	,, ,,	0	,,	,,	9	,,	10	,, ,,
5	,, ,,	0	,,	,,	10	,,	11	,, ,,
2	,, ,,	0	,,	of	11			,, ,,
2	,, ,,	1	,,	,,	15			,, ,,
1	case ,,	0	,,	,,	22			,, ,,
1	,, ,,	0	,,	,,	25			,, ,,
86	Total ...	13						

The arrest column shows that the greater number of the cases (71 out of a total of 86) were observed over a period of from two to nine years during which no fits occurred; while of the cases of remission, although four showed an arrest of from four to five years, in five a relapse occurred up to eight years, after which time only one was found to relapse. When these results are compared in conjunction with those of Wharton Sinkler, who observed only four cases of relapse out of a total of 24 after nine years' remission, I have thought it *unsafe to regard as cured any case of epilepsy in which the seizures have been in abeyance for a period of less than nine years* after the disease has become satisfactorily established. This provision is made in order to eliminate all those cases of remission during childhood which are known to last for seven, eight, or nine years and also those cases in which long intervals elapse between the first and second or second and third fits at the commencement of the disease. In order to obtain the percentage of cures in the present series those cases only have been taken which were under observation for a period of at least nine years. They form a total of 147 of which 15 were arrested for nine or more years (*vide* Table II.), *giving a percentage of 10 2 cures.*[15] Taking the series of cases with long remission recorded in this paper along with those of Sinkler it is found that a few still remain in which relapse occurred after the nine years' limit—viz., four by Sinkler and one by myself. Therefore, although it may be laid down as a general rule that a cure of epilepsy has been established after an arrest of nine years, the fact must be borne in mind that a very small percentage of cases do relapse after that period. While discussing the cure of epilepsy, a point of practical importance which should not be overlooked is that those who have been cured of their seizures not infrequently show various mental peculiarities such as impairment of memory, irritability of temper, headache, and a tendency towards neurasthenic symptoms.

The curable cases of epilepsy.—Although in the present series of cases there is no definite information as to the mental condition of the patients, clinical experience and observation show that many cases of epilepsy may exist for prolonged periods without any material mental impairment. Such cases would appear to belong to what may be termed a curable type of epilepsy. A special investigation has therefore been made into the duration of the disease before regular treatment was established in the 86 cases in which arrest took place From this it is seen that of 44 cases in which arrest took place during the first year of treatment the disease had been in existence during periods varying from one to 35 years, with an average duration of seven years. This investigation also brought forward a point of great importance—namely, that if any given case of epilepsy is capable of amelioration by treatment a satisfactory response will be shortly apparent, as Table XIII. shows.

TABLE XIII., *showing the Influence of Bromide Treatment upon 86 Cases of Arrested Epilepsy.*

Arrest under 1 year's treatment	44	cases,	or 51·7 per cent.
,, ,, 2 ,, ,, ...	9	,,	or 10 5 ,,
,, ,, 3 ,, ,, ...	6	,,	or 7 0 ,,
,, ,, 4 ,, ,, ...	4	,,	or 4·7 ,,
,, ,, 5 ,, ,, ...	3	,,	or 3 5 ,,
,, ,, 6 ,, ,, ...	2	,,	or 2 3 ,,
,, over 6 ,, ,, (7–22 years)	17	,,	or 20 0 ,,
An uncertain case	1	case.	
Total	86		

From Table XIII. it is obvious that over 50 per cent. of the cases in which arrest took place yielded to treatment within the first year of regular bromide administration.

SUMMARY AND CONCLUSIONS.

1. A total of 366 cases, chiefly derived from the out-patient records of the National Hospital for the Paralysed and Epileptic, has been used for the investigation.

2. Only cases of genuine idiopathic epilepsy which had been under constant observation and treatment for a period of at least two years have been taken. All cases of symptomatic epilepsy, or cases otherwise complicated, were as far as possible eliminated.

3 The cases have been divided into three series, according as they have responded, successfully or otherwise, to treatment—arrested, improved, and confirmed cases. The influence of the various conditions modifying prognosis has been mentioned in detail, the results of the observations being stated in percentages.

4. A family history of epilepsy will be found more frequently amongst those who have become confirmed epileptics, but a hereditary history of epilepsy does not necessarily militate against the prospects of arrest or improvement of the disease in any given case.

5. The age at the onset of the disease has an especial bearing upon the prognosis. The most unsatisfactory cases are those in which the disease commences under ten years of age; they show the smallest percentage of recoveries and the largest of confirmed cases. If the disease arises between 15 and 20 years of age an almost equal percentage of arrested and confirmed cases may be expected. The greatest percentage of confirmed cases is found amongst those in whom the disease begins between 25 and 35 years of age, from which time onwards there is a steady increase in the expectations of arrest and diminution in the number which become confirmed.

6. The duration of the malady influences the prognosis to the extent that arrest or improvement is much more likely during the first five than during the second five years. Cases, however, may be arrested even after a duration of from 20 to 30 years.

7. The greatest percentage of confirmed and the lowest percentage of arrested cases occur in those epileptics who

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[14] Reynolds defined a cure as perfect restoration to health for at least four years, and at most eight years, after arrest of the fits.

[15] There is a striking harmony between these results and the percentage of cures obtained by Reynolds (10 per cent. with a basis of from four to eight years) and Habermaas (10 3 per cent. with a five to ten years' basis).

are subject to daily or weekly attacks, while conversely the smallest percentages of confirmed and the highest of arrested cases occur in those whose fits are as infrequent as once or twice a year.

8. The character of the seizures influences the prognosis to the extent that the major attacks are the most tractable; then follow combined major and minor seizures; and lastly, the minor attacks occurring alone.

9. Marriage exerts little, if any, influence upon epileptic fits. Some patients are relieved and others are made worse. In the majority of cases the disease remains unaffected.

10. Pregnancy has little influence upon the seizures; at the best there may be only a temporary respite. On the other hand the puerperium would seem to be especially favourable for the recurrence of fits; while lactation also is not without an exciting influence in their production

[illegible] of epileptic fits is an irregular [illegible] es, however, which have been [illegible] or "decreasing," according as the fits increase or decrease in number in a definite period of time or in which there is a shortening or lengthening of the intervals between the fits. A case of increasing type may by treatment be converted into one of the decreasing variety.

12. Long remissions, induced either by successful treatment or from spontaneous cessation of the fits, sometimes lasting for several years are not unusual in epilepsy; they are of favourable prognostic value but are not synonymous with a cure of the disease.

13 From the collected statistics *a period of remission for at least nine years has been fixed as the basis upon which a cure of epilepsy may be established. With this definition of a cure I regard 10 2 per cent. of epileptics as curable.*

14. There are some cases of epilepsy which may be regarded as belonging to a curable type of the disease. These present little or no mental impairment, notwithstanding that fits may have existed for a long period In the cases in which arrest took place cessation of the fits occurred within the first year of continuous treatment in over 50 per cent.

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Observations sur
jue, Paris, 1818,
aris, 1838, vol. II
l. Herpin Du
Médicale, Paris
ynolds Epilepsy,
Lausanne, 1790
agel Ziemssen's
vous Diseases,
ir Psychiatrie,
reatment, 1884.
Biro Deutsche
arton Sinkler
Tooth Out-
spital Reports,
gel's Specielle
of Nervous and

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MALARIA AS SEEN IN THE ANDAMANS PENAL SETTLEMENT.

BY ERNEST EDWIN WATERS, M.B., C.M. EDIN.,
CAPTAIN, I.M.S.; OFFICIATING SUPERINTENDING MEDICAL OFFICER, PORT BLAIR.

MALARIA is the disease that causes by far the greatest amount of sickness in the Andamans penal settlement and which consequently causes a serious disorganisation of the labour supply and a heavy financial loss to the administration. In 1902 there were nearly 14,000 admissions from malaria and though only 57 deaths were directly attributed to this disease, yet I am convinced that many patients who died from other diseases had their constitutions undermined by previous malarial attacks. In other words, a healthy man has strong resisting powers to the bacilli of dysentery or tuberculosis, but once his vitality is lowered by malaria he falls an easy prey to these complaints. The tax of malarial fever is a very heavy one; taking 14 days as the average period for which fever cases are non effective, malaria alone in 1902 accounted for 196,000 labour units (one man for one day) or, at four annas per day, for 49 000 rupees. This represents the labour of 2000 men for 98 days. And a [illegible]
establi [illegible]

On [illegible] that in 1902 the least malarial month was February, with seven inches of rain, that the admissions increased slightly in March, much increased in April, further increased in May, till they reached a maximum in June. In July there was in nearly all districts a decline in the malaria more or less marked, whilst in August and September, the two wettest months of the year, the admissions *for fever sharply* declined. These statements also apply for the two previous unhealthy years 1900 and 1901, but more especially to the larger stations and districts. Ross Jail and the Female Jail show variations and do not conform to this Table I. shows precisely the proportion of the monthly malarial admissions in the various areas and the rainfall from January, 1902, to March, 1903, inclusive. The rainfall shown is the average of the whole settlement. In 1902 Ross was the wettest station.

TABLE I.—*Showing the Number of Admissions for Malaria into the Hospitals and the Average Rainfall from January, 1902, to March, 1903, inclusive*

Months.	Average rainfall.	Ross.	Aberdeen	Haddo	Female Jail.	Wimberley Ganj	Southern District.
1902.							
January	0 12	15	24	67	21	313	218
February	7 28	12	13	41	29	232	199
March	0 53	22	41	52	20	287	312
April	1 93	33	61	85	19	472	008
May	18 59	31	147	156	34	626	793
June	21·47	35	372	312	192	738	817
July	16 49	75	310	253	196	620	404
August	33 65	39	172	129	123	400	279
September	24 83	27	129	109	89	354	211
October	9 44	37	153	77	85	278	212
November	10 95	58	158	98	84	210	186
December	5 38	67	98	51	53	225	242
1903.							
January	0 31	70	70	40	66	186	165
February	4 61	53	49	35	49	200	180
March	*Nil.*	67	88	64	33	310	213

The approximate strengths in the various hospitals during the period mentioned were as follows: Ross, 700; Aberdeen, 2200; Haddo, 1800; the Female Jail, 400; Wimberley Ganj, 2350; and in the Southern District, 3500.

There are two methods in which we may attempt to account for the prevalence of malaria: (1) the purely mosquito theory; and (2) the relapse or recrudescence theory.

I.—THE PURELY MOSQUITO THEORY.

This would require infection from a specific anopheles to account for every attack of malaria, and the malarial admission rate should be coincident with a marked increase in mosquitoes or at least with more favourable conditions for their existence. Now, our malaria begins in April, the hottest and one of the driest months It increases and [illegible]

which flourishes in the hot month of April and the wet ones of May and June, suddenly dying off in July and subsequent months, although these months, from conditions of temperature and moisture, would appear to be equally suitable for their development. More than this, the number of cases of malaria from which the mosquitoes may become infected is much greater in May and June and consequently the number of infected and dangerous mosquitoes should be much larger With more infected mosquitoes the malaria rate should rise, but it undoubtedly falls. (It has been suggested to me that the mosquitoes themselves become so ill from malarial poisoning that they, too, die off. This theory is ingenious but it is hardly practicable to investigate it.) Also, it may be that in July other mosquito eating insects and animals appear who prey upon the culicidæ and so enormously reduce their numbers.

If we can exclude mosquitoes, does malaria diminish? It does, most decidedly. For the past 15 months careful experiments have been carried out in the Female Jail, one of the most unhealthy and malarious units in the settlement. This experiment was initiated by Major Anderson, I.M.S., and has since been extended by me.

37 women selected from all classes were placed under mosquito curtains, going under them at dusk and coming out in the morning. Their occupation, health, and food in no way differed from any other section of the jail. The remainder of the jail population was divided into two classes. To one class 20 grains of quinine were given in two successive days; to the other no prophylactic issue was made. The effect was most marked. In Class A, in which the women slept under mosquito nets, there were 1007 admissions per 1000; in Class B, who received quinine, the admissions were 2421 per 1000; and in Class C, who received no quinine, they were 4177 per 1000. I believe that the figures would have been better in Class A but for an unfortunate case of chicken-pox in one of the women which necessitated a change in the inhabitants of a second net which had just been occupied. These figures go to show that under conditions prevailing in the Female Jail the exclusion of mosquitoes is an effectual and inexpensive method of reducing malaria.

II.—The Relapse or Recrudescence Theory of Malaria.

This theory is somewhat heterodox nowadays but it has some grounds for consideration. To begin with, practically every native who comes to the Andamans has suffered from malaria in his youth and probably has had several attacks of fever. He has not become immune or he would not suffer from malaria or fever. The malarial parasites are supposed to be locked up in the spleen and under favourable conditions will be eventually destroyed there. But it is a matter of common knowledge that in the case of a person who has once suffered from malaria a chill, over-exposure, &c., will induce a fresh attack, even years after the original infection, and that a malarial subject should avoid circumstances where he is likely to be so exposed. Now, as I have said above, most natives have suffered from malaria and on arrival here as prisoners they are subject to new and trying conditions. The climate, water, and food are strange to them, they are worked hard, and they are constantly exposed to sun, rain, and wind. *Differing from free men they cannot, if feeling only slightly unwell, leave work for a day or two, change their food, or take life a little easily.* They must either work on or go sick to hospital, with the possibility of not being admitted and the risk of punishment. Our hospital figures substantiate this theory. Well-cleared, established stations like Aberdeen, Haddo, and Phœnix Bay are less malarial than out-stations like Goplakabang, but even in the healthy stations it is the men doing hard outdoor work who furnish the bulk of the malarial cases. True, it is these men who have the most inducement to come to hospital; but latterly all our cases of malaria have been examined microscopically and I have yet to find a malingerer who is competent to produce pigmented crescents at will or to arrange for a suitable increase in his large mononuclear leucocytes. It appears to me that the convict may at times derive his fever from the bite of infected mosquitoes but that he may also have a relapse from a previous attack through exposure, overwork, or some cause lowering his vitality. Again, while a healthy, well-nourished man may only suffer slightly from fever after an infected bite, it is obvious that a weakly, chilled, tired man whose powers of resistance are much lowered would in all probability suffer to a much greater or more serious extent.

This question is admirably worked out by Attilio Caccini[1] of Rome. He gives specific instances (with detailed examinations of cases) where fever has re-appeared within 48 hours of exposure to damp and cold, even in patients who were taking quinine regularly at the time of exposure. He further proves "that in patients not treated with quinine, in whom the primary malarial infection has exhausted itself, the attack recurring after a long period always comes on after the intervention of one of these recognised determining causes." In these cases parasites rapidly reappear in the blood. He says, further: "The attack recurring after a long interval exactly resembles true first infection—that is, the paroxysms of fever may be more or less regular; attacks may or may not occur at long or short intervals and they react equally against the quinine treatment. But whereas regular systematic treatment prevents attacks recurring at short intervals it does not prevent those recurring at long intervals, which come on after a space of time which may reach 12 months of apyrexia. The attack always occurs upon the intervention of any of the organically debilitating causes mentioned. Thus with patients treated with quinine and divided into categories according to the method of treatment every category shows the same percentage of attacks occurring at long intervals. In every case the attack followed upon the intervention of one of the debilitating causes above noted. Any patient guarding against debilitating accidents and observing a regular diet may remain free from attacks of fever for a long while (from six to seven months) but suffers a relapse after that time upon exposure to cold, fatigue, wounds, or illness."

Now these statements correspond with our experience here. We know that exceptionally hard work will send up the fever admissions from the men exposed to it, especially when proper precautions are not taken. On Ross Island in the period from December to March there is usually a strong cool wind blowing and it is to this that the population ascribe their fever. They say beforehand that when this wind begins they get fever, and they certainly do. I do not think that at that time there were any anopheles mosquitoes on the island—certainly one could never catch them—and even culices were very rare. The wind came directly from the north-east over some hundreds of miles of sea, so that the chances of infected mosquitoes being carried in may be dismissed.

The probability is that both these theories are true and that direct infection from the mosquito and relapses due to exposure together and unitedly account for the malaria as seen here.

The Means of Diminishing Malaria.[2]

Any measures that will diminish the heavy malarial sick-rate are naturally of the greatest value and much attention has been paid to this question during the past year. So far as our present knowledge goes three, or possibly four, methods are supposed or are likely to be efficacious (always remembering that we are dealing with a malaria-infected population). These are: (1) the destruction of all anopheles mosquitoes; (2) the prevention of infection of, and by, anopheles mosquitoes by means of nets or combustible pastilles; (3) the dosage of the whole population with quinine to an effective extent; and (4) the keeping of the population "fit" or in such a good state of general health that relapses or recrudescences are unlikely.

1. *The destruction of all anopheles mosquitoes.*—This I have no hesitation in saying under local conditions is impossible. The large area of the settlement, the dense vegetation, the heavy rainfall and consequent swamps all make such a task impossible of fulfilment. It may be done over comparatively small areas and in the older stations, but to do it over the 100 and odd square miles within the settlement boundaries is not practicable. But even on a small scale much good may be done and I propose to describe in detail the results of the efforts made. The first attempts were made on Viper, a small island accommodating about 1000 convicts and some 250 troops and police. This island has no streams; its water-supply is from collected rain water, one or two wells, and from a daily ration brought from another station. The island is thoroughly cleared and well drained. Like all other stations the buildings are of wood and as a protection against fire there are wooden fire barrels distributed round all the houses and barracks. These fire barrels were the main sources from which the mosquitoes came and early in the year every barrel swarmed with larvæ and mosquito eggs could always be found. Generally these larvæ and eggs were of the culex variety, but occasionally anopheletes were discovered. The work of getting rid of mosquitoes was commenced in June with a few convalescents who were instructed to keep these barrels clean and to pick up cocoanut shells, &c. The results were excellent so far as the number of mosquitoes were concerned. On every hand one got the same response to inquiries, from officials and convicts alike. The mosquitoes were much less numerous, nets were no longer a necessity, and life was rendered much more tolerable in consequence. At the same time experiments were made with combustible pastilles, so evil-smelling as to be calculated to drive out the mosquitoes from any building in which they were burnt. These were

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[1] Journal of Tropical Medicine, May and June, 1902.

[2] Vide Ross's report on Malaria at Ismailia, 1903.

made of sulphur, charcoal, and saltpetre but were not satisfactory. They were expensive (the cost to burn them twice weekly throughout the settlement at the scale of 1 per 1000 cubic feet would have been about 10,000 rupees) and they were only temporarily effectual. The general opinion was that so long as they were burning neither man nor mosquito could exist within their range but that as soon as they had burnt out sufficiently to permit the inhabitants to return the mosquitoes returned also. Following the small Viper experiment and other small experiments elsewhere a more thorough trial was decided on. In November the Chief Commissioner issued orders forming mosquito brigades in every station and these commenced operations on Dec. 15th. Information and literature, including Ross's book, had previously been widely circulated and the petty officers in charge of the gangs were instructed in their duties. The men of the brigades, numbering in all nearly 200, were equipped with carts, tools, and dippers for searching purposes. Careful arrangements were made to check the exact sleeping places and occupations of all men reporting sick and the blood of every fever case was examined microscopically, often more than once.

In some respects the results of these special gangs have been excellent. Mosquitoes everywhere have enormously decreased—in fact, in many places a mosquito is quite a rarity and as such is immediately noticed. The exact prevalence in bungalows appears to depend on the interest and enthusiasm of the occupants. Many residents have assured me that they can now sleep without nets or punkahs and the convicts all tell me that mosquitoes have much diminished. Besides this the general sanitation of the settlement has much improved. Drains have been cleared, puddles filled, rubbish removed, and undergrowth cut back to a considerable distance. The improvement in the general cleanliness is most marked and in this respect alone the mosquito gangs have done much good. But when we examine the effect of these measures on the malarial admissions we do not obtain such encouraging or consistent results. The results from the principal stations and districts are as follows for the three months during which the brigades have been working (Table II.).

TABLE II.—*Ross Island.*

Period.	Approximate strength.	Admissions for fever.
December, January, and March, 1899-1900	660	43
,, ,, ,, 1900-01	693	82
,, ,, ,, 1901-02	735	48
,, ,, ,, 1902-03	718	203

Of this season's admissions, mullahs furnished 67 and sweepers 25. 49 admissions came from No 1 barrack and 29 from each of the others. Government House, the senior medical officer's bungalow, and the mess, which are close to one another, each had ten fever admissions, whilst two other bungalows, which are side by side gave 13 and 12 admissions respectively. No other house had anything approaching this number. These cases are very difficult to explain on the purely mosquito theory. In the patients (boatmen) from the senior medical officer's bungalow distinct parasites were found and in two cases crescents; at that time of the year it was impossible to discover an anopheles on Ross Island. The patients generally and many of the residents, too, ascribed their fever to the onset of the north-east monsoon which, they say, chilled them and gave them fever. On the other hand, both the areas above named are thickly covered with vegetation which gives good mosquito cover.

TABLE III.—*Female Jail.*

Period.	Approximate strength.	Admissions for fever.
Three months in 1899-1900	359	140
,, ,, ,, 1900-01	379	109
,, ,, ,, 1901-02	406	80
,, ,, ,, 1902-03	401	163

The results shown by Table III are similarly disappointing. It is easy to explain why the Female Jail should be malarious, but it is not easy to explain why it should have been more malarious this year than usual, when stringent sanitary precautions were exercised and when half the inhabitants were taking 20 grains of quinine twice daily.

At Ross hospital the blood of every patient coming to hospital was examined for malaria parasites, whatever his disease may have been. In all, 527 patients[3] were examined and parasites were found in 136 cases. The analyses showed intracellular hyaline, 49 times; intracellular pigmented, 36; extracellular forms, 20; and crescents, 31. There were also combinations of these varieties. In many cases crescents were found in enormous numbers, as many as 180 being counted in a single slide. In other cases crescents abounded in the blood of men feeling perfectly well, having normal temperatures, and who were anxious to go out of the hospital.

TABLE IV.—*Aberdeen.*

Period.	Admissions for malaria.
December to March, 1899-1900	312
,, ,, 1900-01	234
,, ,, 1901-02	70
,, ,, 1902-03	215

At Aberdeen Hospital, too (Table IV.), careful blood examinations were made, but the results are included with those of Haddo hospital.

At the Female Jail the malaria admissions for January were 66; for February, 49; and for March, 33. Microscopic examination of the blood in the 212 cases which were examined (being all the admissions) revealed parasites in 125 cases, of the following varieties: hyaline intracellular, 47; intracellular pigmented, 36; extracellular pigmented, 26; and crescents, 16.

TABLE V.—*Haddo, Chatham, and Phœnix Bay.*

Period.	Haddo fever admissions.	Chatham fever admissions.	Phœnix Bay fever admissions.
1899-1900	152	154	186
1900-01	69	54	92
1901-02	78	33	58
1902-03	49	28	49

In Haddo, Chatham, and Phœnix Bay (Table V.) the results are favourable; everywhere there were fewer cases, although in 1902 the population tended to increase steadily. Possibly the inhabitants of these stations are less exposed in the cold season to changes of temperature than most other men and consequently are more likely to benefit from anti-mosquito efforts. As in other cases, careful blood examinations were always made. 194 fever cases were examined and parasites were found in 173 cases of the following varieties: intracellular hyaline, 101; intracellular pigmented, 23; intracellular ring forms, 21; extracellular pigmented, 10; crescents, 10; segmenting forms, 6; and flagella 2 This blood examination was carried out by Dr. Sanyal who ascribes the high parasite rate to the facts that only "fever" cases are included, that there was no prophylactic issue of quinine going on, and that no quinine was given to the patients until the blood examination had been made and the diagnosis checked.

SOUTHERN DISTRICT.

It is in an unhealthy area such as this that the mosquito brigade work is of special interest Attention was specially directed to Viper, Namunaghar, Dundas Point, and Minnie Bay (Table VI.).

TABLE VI.—*Showing Number of Cases in Southern District.*

Period.	Viper.		Namunaghar.		Dundas Point.		Minnie Bay.	
	Average for 3 years.	1902-1903	Average for 3 years.	1902-1903	Average for 3 years.	1902-1903	Average for 3 years	1902-1903
December	35	76	101	61	49	25	5	9
January	40	53	75	41	33	35	23	12
February	52	64	53	27	43	31	43	19

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[3] These figures include sick from Aberdeen.

Of the 129 admissions from Namunaghar in the three months 83 came from one barrack—the temporary one—but the firewood cutters (who are always unhealthy) lived in this barrack. Altogether the blood of 592 fever cases was examined. In 289 of these malarial parasites were discovered.

TABLE VII.—*Wimberley Ganj Subdivision.*

Period.	Approximate strength.	Admissions.
1899-1900	1480	520
1900-01	1944	916
1901-02	2161	811
1902-03	2352	603

In Wimberley Ganj Subdivision, too (Table VII.), there is a decline in the admission rate as compared with previous years and that although the population of the subdivision has increased. In 1062 blood examinations made from October to February parasites were found in 892 cases, of the following varieties: extracellular hyaline, 851; extracellular, 19; and crescents, 22.

The above tables are, of course, but a summary of all the information which has been collected on this subject but which want of space prevent me from inserting. This account does not exhaust what has been done in the direction of mosquito brigades. In the villages, both ticket-of-leave and free, the system has also been inaugurated and men have been told off to attend to puddles, sanitation, and general cleanliness. The effect of this action is bound to be most marked.

I am indebted to Mr. Lowis, the subdivisional officer of Ross, for much assistance in connexion with the mosquito brigades and for the following information as to local varieties of the insect.

The commonest variety of mosquito in Port Blair is *Culex fatigans.* It is a house mosquito, breeding in any convenient collection of water and biting at all hours, but especially at night. The only other known variety of culex locally found is *Culex concolor*, a larger insect than *Culex fatigans* and possessing larvæ of cannabalistic habits. There is one other small culex found but it has not yet been identified. Of the subfamily stegomyia (Theobald) two species are found—namely, *Stegomyia fasciata* and *Stegomyia scutellaris.* Both are very common here, but they do not affect houses as much as the true culex. They breed usually in stagnant pools containing vegetable débris, such as hollows in trunks of trees. This species wanders further from its breeding-places than culex does and is often found where there is no possible breeding-place and where *Culex fatigans* disappears. Only one variety of anopheles is known here, the *Anopheles Rossii*, and that has been found only in two places. The breeding-place which this variety affected was a series of pits excavated during the building of a convict barrack. This variety was also discovered at Dundas Point. Except when these pits were in existence it was impossible to find any anopheles larvæ on Ross Island. Another mosquito of the subfamily panoplites has also been caught but only in small numbers. Of *corethra* three varieties were discovered, one of which breeds largely in the Ross drinking-water tank and is the only larva to be found there. These corethræ appear to have no biting apparatus and therefore can hardly be said to be carriers of infection. One variety has not hitherto been described and appears to be a new one discovered by Mr. Lowis.

On the whole, mosquito brigades are of distinct benefit; for some unexplained reason they have not succeeded this season in Ross and Aberdeen, but in the other districts the results are encouraging Undoubtedly the stations are much cleaner and the number of mosquitoes less, but the latter are far from being exterminated; they no longer flourish in the fire barrels or in the immediate vicinity of barracks, but except in very small or special areas or where there is enthusiastic European supervision these pests will remain and will continue to carry infection.

2 *The prevention of infection of, and by, anopheles mosquitoes by the use of nets or combustible pastilles.*—At first sight this appears to be the remedy offering the best prospects. We know that a net will keep off mosquitoes and we also know, from 15 months' steady observation in the Female Jail, that persons sleeping under a net have only one-fourth the risk of malaria that unprotected people have and when attacked with fever are a shorter time in hospital. The cost, too, of mosquito netting is comparatively little. Why not, then, introduce it? The great drawback to netting is its interference with ventilation. Even under an ordinary mosquito net the difference in the freshness of the air inside and outside is quite marked and this is equally the case with a larger net containing 20 or 30 people. The women in the jail complain much of the heat under the net and it is absolutely certain that if nets are to be taken into general use as malaria guards the amount of cubic space per head must be very considerably increased, for there is practically no movement of air through the meshes of a thick net. The question is of much importance owing to the prevalence of phthisis and one is confronted by two precisely opposite problems. To check malaria in this way one must put up nets to exclude mosquitoes and consequently seriously interfere with the air-supply. On the other hand, to check phthisis we must have better ventilation, more air, and more superficial space. Which is the better? I think the balance is in favour of more space and more air combined with measures to be presently discussed.

3. *The dosage of the whole population with quinine to an effective extent.*—This procedure is strongly recommended by many authorities, more especially by the Italian observers and by Koch. The theory is that the administration of one gramme of quinine daily for two successive days and the repetition of this every week will check the occurrence of malaria by inhibiting the growth of parasites. The local opinion is against this theory, but quinine had never been given in sufficiently large doses nor had the distribution been made on sufficiently systematic lines. Naturally, over a district comprising 130 square miles of country and populated by men of very varying occupations, who cannot always be caught at meal or other parades, the issue of quinine regularly is a very difficult matter. Major Anderson's experiments showed that small doses of quinine, such as from two and a half to five grains daily, had absolutely no effect on the malaria admissions of the Female Jail but that the effects of large doses were more favourable. Longer observation has confirmed this view. The administration of 20 grains of quinine twice weekly has halved the admissions for malaria but the remedy is not a specific. During the malarial outbreak last year I directed that a further experiment should be made at Bindrabun, probably the most malarious place in the settlement, but the results were most disappointing so far as this station goes. 120 men were taken and their names recorded. To the even numbers 20 grains of quinine were given on two successive days, to the odd numbers nothing. The results were as follows (Table VIII.):—

TABLE VIII.

—	June.		July.		August.	
	Quinine.	No quinine.	Quinine.	No quinine.	Quinine	No quinine.
Admissions.	42	42	31	33	21	22

The average stay in hospital for those men taking quinine was 5 56 days and for those taking no quinine 5·60 days. After August the special experiment was discontinued.

In June last an attempt was made to check the malaria by an issue of ten grains of quinine to every convict on two successive days, repeated weekly. With the help of the executive authorities diaries were arranged and parades were organised. Compounders accompanied by petty officers were sent round the districts and carefully instructed. Each man had his route and times marked out for him, so that all concerned knew what arrangements to make. In the larger stations private servants, boatmen, and others in special employ were attended to by travelling compounders who visited the different houses and so avoided the inconvenience of such men having to attend parades or hospital. This prophylactic issue lasted from June 16th to Dec. 1st. Altogether 496 501 doses (each of ten grains) were issued and about 650 pounds of quinine expended. Over the whole period of five months more than 80 per cent. of the population were receiving this drug, but the results were nothing like what they theoretically should have been nor were they consistent. Thus, for Ross the average admissions from July to December inclusive were as follows: two years no quinine, 150; admissions with quinine, 1902, 236. For

Aberdeen the average admissions from July to November inclusive were as follows: two years no quinine, 960; admissions with quinine, 1902, 922. (There were 300 increase in strength of this station.) For Haddo the average admissions from July to November were as follows: two years no quinine, 818; admissions with quinine, 1902, 877. (There was some increase in strength of this station.) For the Southern District the average admissions from July to November were as follows: three years no quinine, 1234; admissions with quinine, 1902, 1372. (There was considerable increase in the strength in the Southern District.) For Wimberley Ganj the average admissions from July to November were as follows: two years no quinine, 1671; admissions with quinine, 1902, 1759. (There was considerable increase in strength of this station, so that the fever admission rate per 1000 of strength is lower.) For the Female Jail the total admissions for fever in 15 months were as follows: (*a*) receiving quinine, 362, with an average stay in hospital of 5·5 days; and (*b*) not receiving quinine, 695, with an average stay in hospital of 7·35 days. (The strength of each class was nearly the same.)

At first sight it would appear that the issue of quinine has done little or no good or at most that the results have been inconclusive. But 1902 was a particularly unhealthy year and it may fairly be assumed that but for the quinine the malarial admissions would have been even higher than they were. Thus in the two unhealthy districts of Southern District and Wimberley Ganj the fever admissions in the pre-quinine period of 1902 were very much higher than in previous years, whilst after quinine was given the figures assimilate very closely. In the Southern District the three years' average malarial admissions from January to June inclusive were 1983, the average from July to November being 1234. The malarial admissions during the first period in 1902 with no quinine were 2938 (an increase of 955) and during the second period in 1902 with quinine 1374 (an increase of 140). In Wimberley Ganj the two years' average malarial admissions, from January to June inclusive, were 2149, the average from July to November being 1671. The malarial admissions during the first period in 1902 with no quinine were 2668 (an increase of 519) and during the second period in 1902 with quinine 1759 (an increase of 88). Thus quinine seems to have brought the very unhealthy year back to the level of the previous ones, although the population has increased. It is possible that the prevalent type of malarial parasite is largely responsible for the inefficacy of quinine as a prophylactic. One of the commonest parasites [illegible] and this, as [illegible] This fact, [illegible] nts existing without fever or symptoms, has an important bearing on malarial prophylaxis.

4. *The keeping of the population "fit" or in such a good state of general health that relapses or recrudescences are unlikely.*—This suggestion has been already discussed above under the relapse theory and little more requires to be said. It is obvious that the better general health our men are in the less likely they will be to succumb to malaria or other disease. But here the great difficulty is the interference with discipline and with the work of the administration. If labour in swamps, forests, and brickfields is prohibited, if work is to stop at every shower of rain, then I do not doubt that the sickness will decrease, but it does not appear advisable to recommend any such procedure or to attempt to interfere with necessary forms of convict labour in the settlement. Apart from any such steps we may improve the cooking and food-supply, we may introduce drying rooms, or issue extra clothes and so insure that the convict shall have dry things to sleep in. Sanitation, air space, and so on can be attended to and an occasional extra ration may be issued when the labour is excessively trying or hard. With this object in view it is proposed to utilise the Aberdeen drying room for one particular section of convicts during the wet season, to make such arrangements as will insure dry clothes to them and possibly to make special arrangements about their food. The results will be of great interest and will be carefully noted.

I have detailed above the four principal methods in which we may *combat malaria; it is now necessary* to discuss their relative merits and practicability.

It has been pointed out that as far as actual admissions go the mosquito net undoubtedly has the best effect, especially in the case of women living under jail conditions, not doing hard outdoor labour or exposed to rain and storm. But the ventilation difficulty is insuperable unless a very much larger amount of cubic space is provided—a larger amount than one could justly recommend. We are left, then, with mosquito brigades, prophylactic quinine, and general sanitation, and it is to these that we must look as means of checking malaria. I have endeavoured to show that the two former have already had some good effect. It is not unreasonable to hope that as experience is gained in the working of the mosquito brigades better results may be hoped for. *The prophylactic issue did do good and, I think,* not only by diminishing the admissions but over the whole settlement by lessening the periods of detention in hospital. This opinion is supported by the various medical officers in charge of the settlement hospitals, especially in the Female Jail. For general sanitation we must rely largely on the executive officers in immediate charge of the convicts. It is to their interest to have a low sick rate, for the fewer men they have in hospital the more easily can remunerative work be undertaken.

In conclusion, I advocate the following measures as the most suitable for checking malaria:—

1. The retention and, when necessary, expansion of the existing mosquito brigades. The expert trained part of each gang should be permanent and not available for other work. The coolies, drain-makers, &c., may, of course, be taken on and off as required, but the petty officer of the gang who knows what a mosquito larva is like and who can recognise culex eggs and knows the usual hiding and breeding places of the insects should be a fixture.

2. The general administration of quinine throughout the settlement in prophylactic doses.

3. *The establishment in the outlying and unhealthy stations* of branch dispensaries supplied with quinine and simple remedies. This plan was tried last year with much success both in the treatment of malaria and also of dysentery. It at times enabled us to get hold of patients earlier than we otherwise should have done and to save invaluable time in treatment. So far we are hampered by want of an adequate medical and dispensing staff, but it is hoped that more assistance will soon be available.

4. The provision of drying rooms or drying frames at every station and as a corollary the issue of extra clothing. I do not regard the drying room as a panacea for all evils, but I [illegible] clothes to sleep in and a good, [illegible] he comes home from work will enable him much more successfully to fight against malaria and other climatic diseases.

5. The restriction of such unhealthy forms of labour as firewood cutting, swamp work, &c., to the narrowest limits and the granting to men so employed of a small extra food ration. I regard the proposed substitution of coal for firewood [illegible] which cannot but have a go[illegible]

6. [illegible]l public interest in the healt[illegible] ike *to see competition* between stations as to which should have the lowest sick-rates and death-rates and whose malarial admissions should be fewest.

I should like to add a few remarks on the clinical characters of the malaria as locally observed and on the various methods of treatment in use.

Owing to the nomenclature adopted by the Royal College of Physicians of London we are obliged to define our malaria cases as "remittent fever" or "intermittent fever." This is a most unsatisfactory classification; many cases are remittent (in the sense that the temperature does not touch normal) for the first two or three days and then assume an intermittent type for a longer period. The patient in such a case may recover and be returned under either heading according to the ideas of the medical officer in charge of the case. On the other hand, the patient may die after a stay of some weeks in hospital, during the latter part of which stay the temperature may have been normal, intermittent, or even subnormal at times. Yet that case may reasonably be shown as remittent fever by one man and as intermittent fever by another. In the Fort Blair returns "remittent fever" may be taken to mean a severe type of malarial fever, and all cases dying from remittent fever are considered as malarial. These "remittent" cases occur in all parts of the settlement, but especially in the less cleared areas like the Wimberley Ganj and Viper subdivision. 148 cases with 48 deaths were thus returned in 1902. Many of the cases are rapidly fatal, the patients often being brought to hospital in a dying condition. Three or four days are a very common period for the patient to survive and delirium and coma are frequent before death. Hyperpyrexia is not common, though in one fatal case a temperature of 110° F. was noted and in another non-fatal case one of 107°. The men attacked are often old malarial subjects who have had many previous admissions for the disease; one patient had 24 previous admissions recorded, others had 15, 12, 10, and so on.

Malarial parasites are occasionally but not often found. As is well known in these pernicious cases parasites are often absent from the peripheral circulation. On post-mortem examination the outstanding features are the general congestion of the organs, especially of the brain and its membranes, the abundance of cerebro-spinal fluid, and the enlargement of the liver and spleen. The latter in 29 examinations averaged 22 ounces in weight, whilst the liver was frequently well over 70 ounces. These cases coincide very closely with those described by Pewintzky[4] of St. Petersburg in his essay on pernicious swamp fever. The possibility of some of these cases being cerebro-spinal fever was considered, but no definite evidence of this disease was obtained either clinically or microscopically.

Some of these remittent cases yield very well to treatment, but others are most intractable. Hypodermic injections of quinine are freely given, in some cases with much benefit, only rarely with none. Large doses of quinine by the mouth and by the rectum have also been tried. Methylene blue acts well in some obstinate cases. Latterly we have been giving "mass doses" of 30 grains of quinine by the mouth or hypodermically and in most cases with good effect. Often the temperature falls at once and remains down. In no case have we noticed ill-effects from these large doses, nor is hæmoglobinuria known.

An attempt is now made to examine microscopically the blood of every patient who comes to hospital complaining of fever and in this way the blood of 4304 patients has been searched. In many cases two, three, or even more examinations were made. Parasites were found in 2338 cases, the chief varieties noted being intracellular hyaline in 776 cases; hyaline ring form (malignant tertian) in 438 cases; pigmented intracellular in 704 cases; pigmented extracellular in 273 cases; crescents in 123 cases; segmenting forms in 20 cases; and flagella in two cases. More attention was paid to the presence or absence of parasites than to the particular variety, but it is interesting to note that quartan parasites were far from rare and would often resist quinine for some days.

It has been stated[5] that native children frequently harbour parasites without symptoms or rise of temperature. This I can partly confirm. Many children in whose blood we found parasites said that they were perfectly well, but on investigation they were found to be suffering from fever or from enlarged spleens. For example, *all* the children in the Female Jail and attending the Aberdeen school were examined. Of 158 children parasites were found in 58, and of these on examination 40 had fever or enlarged spleen, whilst 18 had no fever. The varieties of parasites were as follows: intracellular hyaline in 22 cases; intracellular pigmented in 23 cases; extracellular forms in 10 cases; and crescents in two cases. Again, at Haddo 68 healthy-looking persons (including Andamanese adults and children, and school children) were examined. Parasites were found in 11 cases, but all of these on examination were found to be suffering from slight fever.

With regard to the diagnosis of malaria by means of differential bloodcounts our results do not altogether agree with those of Rogers. Of over 63 counts and never of less than 500 leucocytes the average is: large mononuclears, 14 per cent.; lymphocytes, 25 per cent.; neutrophiles, 59 per cent.; eosinophiles, 5 per cent.; and others, 2 per cent. Rogers claims 15 per cent. of large mononuclears as a diagnostic sign in malaria, but we do not always get such a high percentage. We have taken specimens in which the crescents were double the large mononuclears and yet the percentage of the latter was only 14 per cent. For instance: large mononuclears, 14 per cent.; lymphocytes, 21·8 per cent.; neutrophiles, 60 per cent.; eosinophiles, 2·8 per cent.; and others, 1·4 per cent. The actual count was 501 and the crescents found numbered 137. The red blood corpuscles numbered 4,026,000 and the white blood corpuscles 6000 per cubic millimetre. On the other hand, in a case of dysentery where the patient did not complain of fever the following count was made: large mononuclears, 16·3 per cent.; polynuclears, 46·9 per cent.; lymphocytes, 34·2 per cent.; eosinophiles, 1·0 per cent.; and others, 1·6 per cent. The total count was 509 and the crescents present were 58. Here the malarial factor of large mononuclears was present, even though the usual dysenteric increase of lymphocytes was marked. Altogether, 265 differential blood counts have been made and many results of considerable clinical interest have been elucidated.

The convicts whom I have trained for microscopical work have been of the greatest use. These men are now well conversant with the different forms of parasites and they can make and stain their own preparations and in some cases can perform differential blood counts.

Port Blair, South Andamans.

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[4] Journal of Tropical Medicine, July, 1902.

[5] Report of the Malaria Commission of the Royal Society.

CHRONIC SUPPURATION IN THE MIDDLE EAR; THROMBOSIS OF THE LATERAL SINUS; GENERAL SEPTIC INFECTION; OPERATION; VENOUS TRANSFUSION; RECOVERY.[1]

BY W. M. WILLIS, F.R.C.S. ENG.,
ASSISTANT SURGEON TO THE NOTTINGHAM GENERAL HOSPITAL AND TO THE NOTTINGHAM CHILDREN'S HOSPITAL.

CHRONIC suppuration in the middle ear is an extremely common disease and in view of the serious complications which sometimes ensue in consequence of its persistence it is well deserving of consideration and adequate treatment. However the inflammation originates, its persistence is to be found in the fact that inefficient drainage exists and this arises from several causes. There is an anatomical cause, which is a bar to efficient drainage in the case of suppuration within the tympanic cavity, inasmuch as that portion known as the attic is a sort of natural reservoir the floor of which is on a higher level than that of the floor of the general cavity of the tympanum and discharge from this position will only occur by overflow. It is common for the inflammatory process to involve the mastoid and here we have isolated cells which communicate with the general tympanic cavity through the largest of them known as the antrum. But the communication of the antrum with the tympanum is reduced in disease, so that efficient drainage is easily impaired. Thus from these causes we have a collection, varying slightly in amount from time to time, but always more or less existing, of what may be termed residual pus and this is present under a certain amount of pressure or tension.

In addition to the foregoing there is a pathological reason why efficient discharge is prevented and this is to be found in the presence of granulation tissue which is present in varying quantity both within the tympanum and on the outer side of the perforation in the tympanic membrane through which the pent-up matter originally made its escape and from which it has continued to issue. Two facts have so often presented themselves to me that I believe them to be true. The first is that the disease in question is eminently curable if freed rainage is established and maintained, and the second is that by reason of the long time some of these cases are allowed to persist either they must be looked upon with apathy or indifference or inadequately treated. If the bar to efficient drainage found in the granulations before alluded to be removed by treatment directed through the meatus and the aperture in the tympanic membrane be enlarged, and subsequently the tympanum be kept surgically clean, the patients in many of these cases will quickly get quite well. Some, however, will not and more extensive measures will be required. For these, when the less severe methods have been thoroughly tried and failed, the operation of opening the mastoid antrum or that known as complete mastoidectomy will need to be performed. This can be urged with much confidence as a cure can be promised and the mortality *per se* may be disregarded.

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[1] A paper read before the Nottingham Medico-Chirurgical Society on Jan. 21st, 1903.

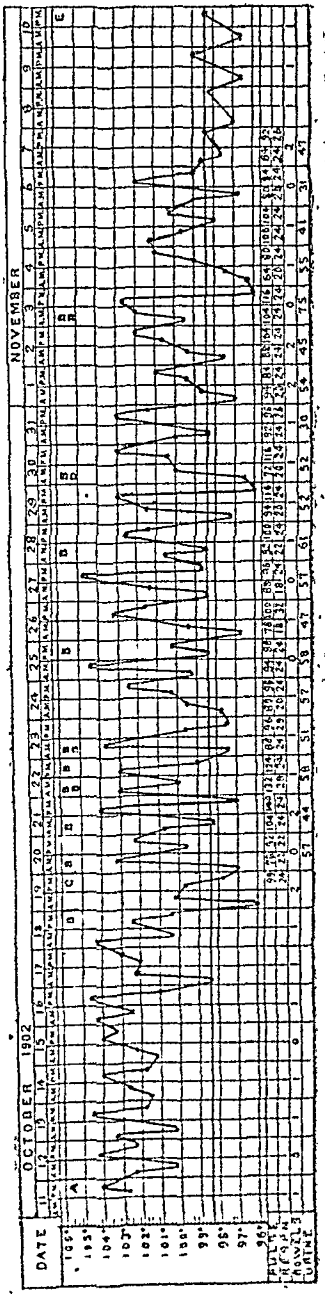
Cases will have to be decided upon on their own merits. In some an operation on the lines of that originally devised by Schwartze will be adequate but in others the more extensive proceedings practised and described by Stäcke will be needed. In either operation it is necessary to have an accurate knowledge of the anatomical structure of the parts and to exercise an abundant care in the steps of the operations; but provided these conditions can be complied with then the operations are reasonably safe and will afford good results. There will be careful and patient subsequent treatment necessary oftentimes, but in the end a cure will be effected.

These preliminary observations on chronic suppuration in the middle ear serve as a preface to the description of a case recently under my care, [illegible] was followed by thrombosis [illegible] into the jugular vein, and [illegible] infection as evidenced by si[illegible] and effusion of fluid into the pleural cavity and repeated rigors.

The patient, a male, aged 19 years, was admitted into the Nottingham General Hospital on Oct. 11th, 1902. He complained of pain in the head and gave the following history. There had been a discharge of matter from the right ear for nine years, it having followed an attack of scarlet fever. One week before admission he was seized with sudden illness and suffered from shiverings, vomiting, and intense pain in the head. Coincidently, he stated, the discharge from the ear ceased. His condition on admission was as follows. The temperature was 102 8° F He had pain in the head, especially on the right side, stiffness and tenderness of the muscles of the back of the neck, and some retraction of the head. There was an indistinct fulness to be felt in the neck high up just below the mastoid process. He was under the care of Mr. Joseph Thompson at this time who in view of the patient describing himself as feeling better, and as the temperature was falling, and there being no urgent symptoms, decided to watch the case for a time His condition remained much as above described until Oct 18th, when, for the first time since admission, he had a rigor which lasted for 20 minutes and the temperature rose to 105 2°.

On Oct. 19th Mr. Thompson, being unable to attend, asked me to see the patient and I then learnt the fact of the rigor on the evening of the 18th and found that during the time he had been in the hospital, whilst there had been no rigors other than that mentioned, yet there had been an extremely oscillating temperature which the accompanying chart will show. In addition to the temperature there were present headache, purulent discharge from the right ear, tenderness and stiffness of the muscles of the back of the neck, and a fulness down the upper half of the anterior border of the sterno-mastoid on the right side There was no optic neuritis.

I formed the opinion that he had a thrombosed lateral sinus and operated on the same morning I first turned down a semilunar flap about two inches in diameter, one side of the incision falling just behind the pinna and the other nearer the occipital protuberance. Baring the bone and drawing the pinna well forward I defined the bony margin of the external auditory meatus I then opened the mastoid antrum and cleared out a small quantity of inspissated pus which it contained. The next step consisted of trephining over the lateral sinus, exposing it by the removal of a half-inch disc of bone. An incision into the sinus revealed the fact that it was full of clot. Leaving the skull I now turned to the neck and exposed the internal jugular vein and found that the thrombus extended low down into this. I therefore ligatured it as low down as possible but could not get below the clot, and excised some one and a half inches of the vein above the ligature Returning to the skull I slit open the sinus and removed the clot and syringed through with sterilised water from the sinus to the jugular vein exposed in the neck, washing out thereby all the contained clot. Bleeding now became free both from the sinus and the jugular vein. The latter was therefore ligatured and the former was plugged with gauze, the hæmorrhage being thus easily controlled. The skull flap was then stitched into position, gauze plugs being in the sinus and in the mastoid antrum,



A, Admission. B, Rigor. C, Operation. D, Transfusion of three pints of saline solution. E, Got up; weight 9 stones 13 pounds. (On Nov. 28th the patient weighed 10 stones 1 pound.)

the ends of these issuing from the respective angles of the wound. The wound in the neck was then closed, and here I may say that this was a mistake, as it suppurated later and had to be completely undone; no harm, however, ensued.

By this complete operation I succeeded in removing nearly the whole of the septic clot and in addition cut off the main supply of septic material from entering the general circulation. I therefore looked for a cessation of the symptoms which had previously existed and hoped for an uninterrupted recovery. But in this I was disappointed. The operation was performed on Oct 19th and without giving the detailed notes taken from day to day suffice it to say that his symptoms continued. He had repeated rigors and high temperatures, a chart of which is appended. In the intervals of the rigors he felt fairly well but extremely weak.

On Oct. 25th my note says: "Breathing seems a little laboured; crepitations to be heard at the third left rib in front and impaired resonance at the left base." The physical signs remained thus for the next day or two and the rigors were repeated. I therefore resolved to adopt a method which I have not seen described as having been employed for the treatment of undoubted general septic infection.

I think there can be no doubt that it was a case of true septic infection as distinct from septic intoxication—i.e., septicæmia as against sapræmia—this view being supported by the fact that the main part, if not the entire supply, of septic material had been cut off, in spite of which the constitutional symptoms persisted and the condition in the lungs above described supervened. His only hope of recovery I considered lay in an increase in his power of eliminating the poison with which he was saturated and this I thought I could effect for him by largely diluting his blood. On Oct. 30th I therefore admitted into his right median basilic vein three pints of normal saline solution and one ounce of brandy. On Nov. 2nd my note says: "Has had no rigor for several days and there has certainly been an improvement in his condition ever since the transfusion." (See temperature chart.) "There are some dulness at the left base and a diminution of breath sounds and vocal resonance." On the 3rd I opened the median basilic vein of the left arm and removed nearly one pint of blood; I then transfused him with another three pints of normal saline solution and one ounce of brandy. On the 10th my note states: "He has improved immensely since the last transfusion. For the last three days his temperature has been practically normal." (See temperature chart.) On the 3rd the second transfusion took place and the temperature did not finally reach normal until the 7th, but in the intervening four days it was lower on the average and the elevations were not so great when they did occur. The chart for these days suggests a final flicker of the disease. The quantity of urine excreted subsequently to the transfusions did not show any great increase, though it was a little more, but there was marked sweating, his garments being frequently changed when wet through. It was in this way, possibly, that he eliminated toxic elements.

His final recovery was now uninterrupted and he is at the present time perfectly well and was shown at a meeting of the Nottingham Medico-Chirurgical Society on Jan. 21st, when this account of the case was read.

In conclusion, I would say that this short paper does not presume to be an elaborate account of the treatment of chronic suppuration in the middle ear, but merely expresses the opinion that that disease is eminently curable, and in view of its complications, should be cured. Secondly, in a brief and imperfect manner the lines on which such treatment should be carried out are suggested and outlined. Finally, in respect of the thrombosed lateral sinus, the operation described is in no way novel, but is the method very frequently adopted. In regard to the history of the case, however, subsequent to the operation, the evidence which the case affords seems to me to warrant the opinion that the patient's life was saved, when he would otherwise have died from septicæmia, by the transfusions which were performed and I venture to submit this for publication as I have not seen any similar case recorded.

Nottingham.

NEW WORKHOUSE INFIRMARY AT BIDEFORD.—The new workhouse infirmary at Bideford, Devon, was formally opened on June 2nd in the presence of a large gathering. The building will accommodate 38 persons and has been erected at a cost of £3248.

THE ANILINE DYES AS THERAPEUTIC AGENTS.

BY ANDREW BALFOUR, M.D., B.Sc., M.R.C.P. EDIN., D.P.H. CANTAB.,

DIRECTOR, WELLCOME RESEARCH LABORATORIES, GORDON MEMORIAL COLLEGE, KHARTOUM.

IN looking over the pages of that excellent compilation the *Medical Annual* for 1903 I was interested to find an article stating that methylene blue has been used with success as a sedative in cases of insanity. Ehrlich and Leppmann[1] in 1890 used this stain as an analgesic, administering it both internally and hypodermically, and reported favourably upon it. They were led to employ it from the fact that methylene blue will stain during life the axis cylinders of both sensory and motor nerve fibres. They stated that colouration of the nerves followed hypodermic injections. Combemale,[2] Gaillard, and Piotrowski denied this action, but, on the other hand, Pilliet[3] confirmed the observations of Ehrlich and Leppmann both as regards the staining of nerves and the analgesic effects, while Combemale admitted that the drug was useful in neuralgic and ataxic pains.

Some years ago I was engaged upon an investigation into the toxic properties of the dye stuffs which was embodied in an M.D. thesis,[4] but the results of which I did not publish. The work dealt chiefly with the effects of these dyes on the public health and more especially with the subject of river pollution, but to some extent it considered them from a pharmacological standpoint. I experimented largely with fish—roach, dace, and gudgeon—and was surprised at some of the curious results obtained. Of peculiar interest was the apparent affinity of certain of the aniline dyes for the central nervous system. Unfortunately neither the thesis nor any of my notes are at hand and I have to rely on my memory, but I well recall that both methylene blue, tetra-methyl-thionine-chloride, $C_{16}H_{18}N_3SCl$, and chrysoidine, the hydrochloride of diamido-azo-benzene, $C_6H_5N_2C_6H_3(NH_2)_2HCl$, exhibited this property to a marked extent. It was found that when fishes were placed even in very dilute solutions of these dyes (1 in 500,000 in the case of chrysoidine) they were speedily killed and on post-mortem examination were found to be stained through and through. The scales took on the stain vividly, the muscles were stained, but above all the brain and spinal cord were deeply coloured. It was hoped that this property might be utilised for staining *en masse* in histological work, but it was found on microscopical examination that the staining was diffuse and useless for purposes of differentiation. These two stains in particular seemed to pass very rapidly into the blood stream, no doubt *viâ* the gill arches, but chrysoidine was by far the most toxic. Indeed, it proved to be the most poisonous of any of the numerous aniline dyes employed. I am not aware that this dye has been used therapeutically though its disinfectant action has been tested.

Methylene blue has proved of value in malaria and to some extent also in bilharzial disease where it certainly produces sedative effects though its precise mode of action is unknown. It seems to me that chrysoidine might be given a trial.

I did not find it nearly so toxic for rabbits as for fish but it would have to be employed at first with caution and probably only after some experiments on mammals had been conducted. It has the property of precipitating the vibrios of cholera quantitatively from solutions in which they are held in suspension. The other azo compounds do not possess this property and I remember that in other ways chrysoidine was found to differ from allied chemical substances.

Any drug likely to benefit those suffering from the invasion of the *Schistosoma hæmatobium* (to adopt the most recent nomenclature) would prove a great boon in Egypt and it is just possible that chrysoidine might succeed where others have failed, while in the light of what I have stated it might also find a use in those nervous cases where methylene blue has been tried with gratifying results.

Khartoum.

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[1] Deutsche Medicinische Wochenschrift, June, 1902.

[2] La Semaine Médicale, May, 1891.

[3] La Tribune Médicale, October, 1890.

[4] *Andrew Balfour: The Toxic Properties of the Dye Stuffs*, with special Reference to their Effects upon the Public Health and *to River* Pollution (M.D. thesis, gold medal, Edinburgh, 1898).

A CASE OF CONGENITAL DEFORMITY OF THE SKULL ASSOCIATED WITH OCULAR DEFECTS.

BY H. WORK DODD, F.R.C.S. ENG.,
OPHTHALMIC SURGEON TO, AND CLINICAL LECTURER ON OPHTHALMOLOGICAL MEDICINE AND SURGERY AT, THE ROYAL FREE HOSPITAL; SURGEON TO THE ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, ETC.;

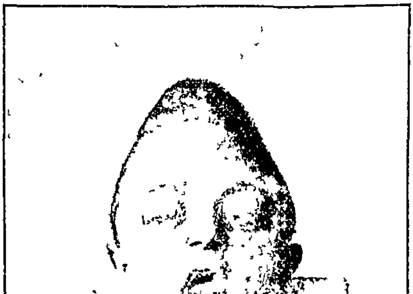
AND

W. HALLIBURTON McMULLEN, B.S. LOND., F.R.C.S. ENG.,
PATHOLOGIST AND CURATOR TO THE ROYAL WESTMINSTER OPHTHALMIC HOSPITAL; ASSISTANT OPHTHALMIC SURGEON TO THE MILLER HOSPITAL AND ROYAL KENT DISPENSARY.

THE following case is interesting both on account of the remarkable deformity of the skull and also on account of the association with this deformity of certain ocular defects

The patient is a boy, aged seven years, who was brought to the Royal Westminster Ophthalmic Hospital on account of the prominence of his eyes and slightly defective vision. He was born at full term after a somewhat difficult labour lasting 12 hours, but no instruments were used. His father stated that the head was deformed and the eyes were prominent at birth and that the shape of the head was then much the same as it is now. This statement is confirmed by Dr. Shelmerdine of Sandgate who saw the child shortly after birth. The patient is a backward child; he did not walk until nearly two years of age, became clean in his habits at two and a half years, and began to talk at three years. He has now been to school for two years but only knows a few letters and counts to four or five. For some time his parents have thought that his vision has been slightly defective They have also noticed slight deafness which has increased lately. He has never had convulsions or fits and there is no history of rash or other signs of inherited syphilis.

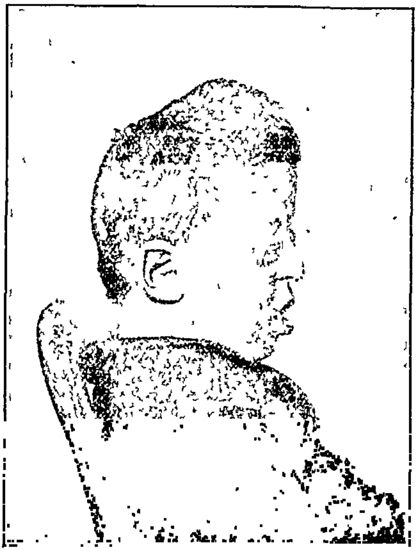
FIG. 1.



Aspect of patient, front view.

With regard to the family history the patient is the third child in a family of four. All the others are healthy, normally developed, and intelligent. There is no history of syphilis in the parents or of deformity, bone disease, insanity, or fits in any of his relatives.

FIG. 2.



Aspect of patient, side view.

The patient's present condition is as follows. (Vide Figs. 1 and 2.) He is of somewhat stunted growth (height three feet eight inches) but fairly well nourished. His head is of very peculiar shape, showing remarkable projection upwards of the anterior part of the cranium and very marked bulging in the temporal regions. The face is broad and flat; the eyes are very prominent and widely separated and there are traces of epicanthic folds; the nose is small, the bridge being short and narrow; the mouth is kept open, the lips are rather thick and projecting, and the tongue protrudes slightly between them. The neck is short, not unduly thick, and there is no enlargement of the thyroid gland. His gait is clumsy and slouching and he walks with a decided stoop, the head being thrust forward. His skin is thin and supple and his hair is normal. The principal measurements of the head are as follows: horizontal circumference, 48·5 centimetres; naso-occipital arc, 36 centimetres; binauricular arc, 34 centimetres; antero-posterior diameter, 15·6 centimetres; greatest transverse diameter (bi-temporal), 14 2 centimetres; binauricular diameter, 11·7 centimetres; distance between external angular processes, 10·2 centimetres; height of face, chin to hair, 14 5 centimetres; height of orbits, 3·3 *centimetres; and breadth of orbits*, 3·2 *centimetres*. The horizontal circumference is but little below normal, the average measurement according to Still being 49·5 centimetres at six years of age and 51·25 centimetres at eight years.[1]

The most remarkable features are the great excess in height and width The abnormal height is shown by the great relative length of the naso-occipital and binauricular arcs, the former being practically equal to three-quarters of the total horizontal circumference. The great relative width is shown by the high cephalic index—i e., $\frac{\text{breadth} \times 100}{\text{length}}$, which works out at 91·7; the average cephalic index in European skulls varying from 75 to 80 The excess in height is limited to the anterior part of the cranium, being due to a very marked upward projection over the frontal region extending back only as far as a point vertically above the external auditory meatus. The prominence so produced is somewhat compressed laterally and a low wide ridge can be felt in the middle line extending from the glabella to the back of the prominence. Just behind the prominence there is a small depression in the middle line, possibly indicating the site of the anterior fontanelle. The forehead is very high and vertical in the middle line, but on either side recedes markedly, forming a distinct depression above the outer part of the superciliary ridge. The excessive width is due to bulging in the temporal regions so great as to extend outwards on each side considerably beyond the level of the outer surface of the zygoma. This bulging is slightly greater on the left than on the right side, and on both sides it is limited above by the temporal ridge where a well-defined margin can be felt. The temporal muscle is palpable only for about half-an-inch above the zygoma. The superior curved line of the occipital bone is rather prominent and there is a slight mesial ridge on the interparietal portion of the bone and also along the line of the sagittal suture. There are no definite parietal eminences. The superior maxillæ are poorly developed; the palate is narrow and very highly arched and the premaxillæ are deficient; there are only one permanent incisor on the left side and no room for more on that side. Many of the teeth are carious.

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[1] Goodhart and Still: Diseases of Children.

There are certain defects, probably developmental, in other parts of the body. On both sides, on extension and supination of the forearm, the head of the radius becomes subluxated forwards, apparently owing to laxity of ligaments. On flexion the head of the bone returns into place. This defect does not impair the usefulness of the limb or interfere with its movements. Congenital dislocation of the radius is a very rare condition; indeed, Stimson was of opinion that the majority even of the few cases reported as such were really cases of unreduced dislocation which had occurred in early life.[2] But in this case it appears probable that the slight defect is congenital as it is symmetrical and associated with developmental defects in other parts of the body. The phalanges of the great toes are abnormally broad: there is slight hallux varus, and the interphalangeal joints are ankylosed with some inversion. The arches of the feet are flat. The knee-joints are rather large and there is slight genu valgum.

With regard to the ocular symptoms, there is very marked proptosis, fully half of each eyeball being in front of the plane of the orbital margin. There is fine lateral nystagmus which is barely perceptible except on ophthalmoscopic examination; the ocular movements are otherwise normal. The pupils react to light and to accommodation. Ophthalmoscopic examination is difficult on account of the nystagmus. The optic discs are white, the margins are well defined, and the foramina of the lamina cribrosa are not visible. The veins are rather tortuous. The appearances suggest post-neuritic atrophy. Vision appears to be fair; the boy can count fingers at six metres with each eye. More exact determination is impossible on account of his defective intelligence. Hearing is slightly defective. He does not hear a watch ticking until it almost touches his ear. The external auditory meatuses and tympanic membranes are normal. The heart and lungs are normal.

The cranium in this case is rather of the oxycephalic or steeple-shaped type, the characteristics of which are great development of the vertical at the expense of the antero-posterior dimensions, the transverse measurements differing but little from the normal. Virchow found that cranial deformity of this type was due to premature synostosis of the parietal bone with the occipital and temporal bones, associated with compensatory development in the region of the anterior fontanelle.[3] The present case is remarkable on account of the very marked projection upwards of the part of the skull in front of the anterior fontanelle while the posterior part of the skull is no higher than usual, and also on account of the very great bulging in the temporal regions. Mr. Henry Power in 1894 published a case of remarkable cranial deformity associated with extreme proptosis.[4] The patient was an infant who died 30 days after birth. A cast of the head and a section of the head itself are now in the Museum of St. Bartholomew's Hospital. The similarity between the head of this infant and the head in our case is striking, the most noticeable features in both being great upward projection over the frontal region and bulging in the temporal region, but in Mr. Power's case these features are more marked than in ours. The skull of the latter case was examined by Professor D. J. Cunningham who found that every suture and synchondrosis of the skull was firmly ossified with the single exception of that between the basi-occipital and the ex-occipital.[5] Probably, then, the deformity in our case also is due to premature synostosis of certain cranial sutures with compensatory development in other regions. Thus it may possibly be explained as the result of early ossification of the lambdoid, parieto-temporal, all or part of the sagittal and perhaps of the coronal sutures, while the great upward development in the frontal region may be due to persistence of the frontal suture and overgrowth in that region.

Cases of cranial deformity associated with ocular defects form an interesting group. Such cases are rare but the ocular defects observed in them are so constant that it appears highly probable that these defects are dependent on, or at any rate are closely related to, the deformity of the skull. The variety of cranial deformity most commonly found in these cases is oxycephaly. Of a series of 19 published cases collected by Friedenwald, in 12 the crania were oxycephalic, in three scaphocephalic, and in the rest various other kinds of deformity were present.[6] Of the associated ocular defects optic neuritis or post-neuritic atrophy is the most important. As a rule, cases do not come under observation until they have reached the atrophic stage. The history of these cases is generally somewhat as follows. The cranial deformity is noticed at birth or very soon after. During infancy the children frequently suffer from convulsions and not uncommonly from epileptic fits when they grow older. More or less defect of vision becomes evident generally at an early age but sometimes not till later in life. Some of the patients are mentally deficient, but the majority possess average intelligence and a few are described as unusually bright and clever. When brought under observation the following are the ocular conditions noted. In nearly all cases there is proptosis, in many divergent strabismus. There is defect of vision varying from slight deficiency to complete blindness in one or both eyes. On ophthalmoscopic examination the discs generally present appearances characteristic of post-neuritic atrophy. Of Friedenwald's 19 cases atrophy was present in 15. In two cases optic neuritis of choked disc type was present when first seen, atrophy supervening later. In one case there was acute neuritis which was entirely recovered from, with restoration of sight. In a case published by Stood the fundus was normal although there was total blindness which was attributed to defective development of the occipital lobes.[7] In many cases vision gradually deteriorates, but in some it remains unaltered.

The pathology of these cases is somewhat obscure. The proptosis is due to malformation of the orbits, which, especially in oxycephalic skulls, are very shallow and abnormally high in proportion to their width, the vertical diameters being equal to, or greater than, the horizontal, as in our case, whereas in the normal skull the horizontal are greater than the vertical measurements. In Power's case the orbits were extremely shallow and very high, the roofs being nearly vertical in position. Weiss and Brugger, who carefully measured four oxycephalic skulls in the Heidelberg Anatomical Institute, found that the average depth of the orbits in these skulls was 10 millimetres less than normal and the cubic contents six centimetres less than the average. This abnormality in shape was principally due to the position of the great wing of the sphenoid which went to form the posterior instead of the outer wall of the orbit. Moreover, the roofs of the orbits were unusually highly arched. They consider that the shape of the orbits is such as to cause the eyeball to occupy an unusually high position and to this largely they attribute the proptosis.[8] Various opinions are held as to the cause of the optic neuritis. Post-mortem examinations have been made in only three of these cases. Michel found hyperostosis of the skull, narrowing of the optic foramina, and pachymeningeal thickening over the cortex.[9] Manz and Ponfix also

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[2] Stimson: Fractures and Dislocations (1901), p. 669.

[3] Virchow: Gesammelte Abhandlung zür Wissenschaftlichen Medicin.

[4] Power: Transactions of the Ophthalmological Society, 1894, p. 212.

[5] Swanzy: Norris and Oliver's System of Diseases of the Eye, vol. iv., p. 633.

[6] Friedenw[illegible] 1901, vol. xxxi., p. 405.

[7] Stood: [illegible] 1884, p. 248.

[8] Weiss a[illegible] d xxiv., p. 55.

[9] Mi[illegible] p. 39.

[illegible]

neuritis. This view, however, is not generally accepted because the optic foramina are usually of normal size in synostotic crania. Weiss and Brugger found no narrowing of the foramina in the four oxycephalic skulls which they examined, but in all four skulls they found the dorsum sellæ large and pushed forward and suggest that the neuritis may be due to pressure during early life on the optic chiasma or on the optic tracts in the neighbourhood. Virchow and Hirschberg attribute the neuritis to some inflammatory intracranial trouble, in most cases probably pachymeningitis which may also be the cause of the cranial deformity.[11] Virchow in his examinations of synostotic crania found that meningeal disease, especially pachymeningitis, was of frequent occurrence. Manz also favours the view that fœtal meningitis and osteitis are the underlying causes of the condition. Friedenwald suggests increased intracranial pressure, the result of premature synostosis, as the cause of the neuritis, which he therefore considers analogous to that associated with intracranial tumours. This explanation cannot be considered satisfactory until it is proved that optic neuritis occurring in cases of intracranial tumour is, in fact, due to pressure merely, a view not universally accepted. Moreover, in many of these cases there seems no reason to suppose that the cranial capacity is diminished and hence no increase of intracranial pressure would occur.

The cause of the whole condition remains quite obscure. In one of Hirschberg's cases there was a history of similar cranial deformity in a maternal grandfather; in another a definite history of syphilis in the parents; but in the majority of cases there is no history of deformity or specific disease in the parents and no evidence of the latter in the patients. The deformity is quite unlike that produced by rickets, and in rickets closure of the sutures is delayed; in these cases it is premature In our case there is no sign of rickets and there is no mention of its occurrence in any of the published cases. In the present case the existence of a slight degree of cretinism is suggested by the clumsy build, thick lips, largish tongue, and dull aspect. The shape of the head, however, is quite different from that usually associated with cretinism—viz., a broad short head, with flattened forehead, which Virchow found to be produced by premature ossification of the spheno-occipital synchondrosis. Moreover, the abnormal shape of the head was noticed at birth, but the cranial deformity of cretins develops gradually in the early years of life. His skin is thin, supple, and moist; there is no thickening of the subcutaneous tissue, prominence of abdomen, or lordosis; his hands and feet though rather large have not the thick podgy character of the cretin's; he shows considerable activity and curiosity, seldom remaining still for more than a few minutes at a time. It was considered advisable, however, to try the effect of a course of thyroid medication, but no benefit has resulted. It must be acknowledged that at present nothing is known of the ultimate cause of the condition; it remains a problem to be solved probably only when we possess a much fuller and more exact knowledge of ante-natal pathology.

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[10] Manz: Bericht der Ophthalmologischen Gesellschaft zu Heidelberg, 1887.

[11] Hirschberg: Centralblatt für Praktische Augenheilkunde, January, 1883.

ROYAL MEDICAL BENEVOLENT FUND SOCIETY OF IRELAND.—The annual meeting of the Royal Medical Benevolent Fund Society of Ireland was held at the Royal College of Surgeons in Ireland on June 1st, Mr L H. Ormsby, President of the College, being in the chair Having approved of the report and statement of accounts, the meeting elected the committee and officers for the year.

BRITISH MEDICAL ASSOCIATION, DUBLIN DIVISION.—The first annual meeting of the Dublin division of the British Medical Association was held at the Royal College of Physicians of Ireland on June 4th, when the following office-bearers were elected for the ensuing year—Chairman, Mr. Arthur Chance; vice-chairman, Dr H T. Bewley; and honorary secretary, Mr. K. E L. G. Gunn. Dr. F. W. Kidd was chosen to represent the division of Dublin at the meeting of the British Medical Association to be held at Swansea in July next.

CHRONIC VOLVULUS OF THE SIGMOID FLEXURE; INTESTINAL OBSTRUCTION; OPERATION; RECOVERY.

BY HERBERT WILLIAM ALLINGHAM, F.R.C.S.ENG.,
ASSISTANT SURGEON AND LECTURER ON OPERATIVE SURGERY AT ST. GEORGE'S HOSPITAL;

AND

E. CHITTENDEN BRIDGES, M.D., B.S. DURH.,
CLINICAL ASSISTANT AT THE ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

THE patient was a man, aged 54 years, who for the previous 30 years had been subject to attacks of constipation recurring at periods of from four to six weeks and lasting from five to six days, accompanied by great pain in the lower half of the abdomen. Vomiting usually occurred towards the end of the attacks. At times there was considerable distension of the abdomen He had always been able to pass flatus per rectum during the attacks and there had been no difficulty with micturition. Towards the end of the attack the bowels usually acted very copiously as the result of medicine (blue pills, black draughts, or cascara sagrada). No blood, slime, or mucus was passed per rectum. There was no pyrexia or loss of weight.

The history of the present attack was as follows On the evening of April 18th the patient returned home from his office complaining of feeling cold. The bowels had acted once and but slightly. On the 19th, and again on the 20th and 21st, the patient took cascara sagrada with no result except that of much griping pain in the abdomen. There was no vomiting. On the 22nd, shortly after starting for his office, he had to return home on account of severe pain in the abdomen and he felt very faint. There was much straining at stool but with no result except the passage of flatus.

One of us (E. C. B.) saw the patient for the first time on April 23rd; he was lying on his back in bed with his legs drawn up and complained of considerable pain in the abdomen, especially over the left iliac region; this was much aggravated by digital pressure. He had been sick once that morning and had brought up the contents of his stomach. He had perspired very freely during the night and had passed flatus The abdomen was moderately distended and the percussion note was tympanitic. No peristaltic action of the intestines was seen through the abdominal wall which moved freely on respiration. The liver dulness was slightly diminished. On examination the rectum was found to be quite empty and ballooned; no growth was felt. The pulse was 68, regular, and of good volume The temperature was normal. The respiration was not hurried and was partly abdominal The tongue was covered with a dirty brown moist fur on the dorsum. The breath was foul but not fæcal The urine was loaded with urates. There was no albumin. An enema of soap and water with half an ounce of turpentine was ordered, but with no result except the passage of much flatus; an ounce of castor oil was therefore administered. On the 24th the castor oil had acted three or four times with much abdominal pain, a few drops of blood accompanying the motion. There was no slime The patient felt sick The temperature was normal. The pulse was 68; regular and soft. The tongue was furred. On examining the abdomen, which was much less distended than on the [illegible] swelling could be felt [illegible] patient much pain [illegible] more distinct and [illegible] As the patient appeared to be in considerable pain ten minims of nepenthe were ordered, to be repeated, if necessary, during the day. On the 25th the patient felt better; he had no pain to speak of and no nausea or vomiting He had passed wind freely after an enema (soap and water with half an ounce of turpentine) the evening before but no solid motion. There was no change in his condition on the 26th or 27th On the 28th he had a bad night. There was much abdominal pain and he felt very sick The breath was foul (? fæcal) The pulse was 80 and very thin; the temperature was 98·4° F. There were general uniform distension of the abdomen and much tenderness over the left iliac region and the sausage-shaped swelling could be distinctly felt. Mr. Allingham saw the patient in consultation and agreed that immediate operation should be performed.

Operation.—The ordinary incision for left inguinal colotomy was made but only collapsed small intestine presented itself. On enlarging the wound upwards and downwards and passing the fingers towards the middle line an enormously distended gut was felt which was with considerable difficulty brought into the wound; this was punctured and the gaseous contents were allowed to escape; the difficulty experienced in bringing the gut into the wound was found to be due to adhesions between the coils of the intestine. On drawing the gut out of the wound and examining it it was found to be a volvulus of the large intestine (sigmoid flexure which was at least 3 feet long), to which was attached a very long mesocolon and many adhesions which were evidently of long standing, as was borne out by the history of the patient. The adhesions were broken down and the volvulus was reduced. Before the wound was sewn up the sigmoid flexure was attached by two sutures to the abdominal wall, one at the upper part of the wound and one at the lower, the object being to prevent a recurrence of the volvulus. With the exception of slight thrombosis in the left leg the patient made an uninterrupted recovery.

Remarks by Mr. ALLINGHAM.—From the condition found at the operation—viz., old adhesions at the seat of the twist of the gut—I am disposed to think that the volvulus was always present and only gave rise to symptoms when the part contained within the volvulus became distended with flatus and so caused the attacks which the patient had complained of for so many years. In the last attack, however, the distension of the gut became so great that the muscular coat of the bowel became paralysed from over distension. Since the operation there has been no return of the old symptoms. So that one may conclude that the sutures which were put into the gut to secure it to the upper and lower part of the wound have prevented the enormously long sigmoid flexure from twisting on itself again and so re-forming the volvulus.

Note by Dr. BRIDGDES.—It is now over 12 months since the operation was performed and the patient has had no return of his old symptoms. The bowels act regularly without medicine and he expresses himself as never having felt so well before.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF SEVERE UTERINE HÆMORRHAGE TREATED BY IODIPIN.

By GEORGE E. KEITH, M.B., C.M. EDIN.,

LATE ASSISTANT TO PROFESSOR OF CLINICAL SURGERY, ROYAL INFIRMARY, EDINBURGH.

THE patient was a single woman, aged 49 years, who had been suffering from menorrhagia and metrorrhagia for some years. Up to the age of 43 years she was quite regular and the amount of loss was normal. About six years ago she noticed that the flow began to last longer and that she lost more than formerly. This gradually got worse until two years ago, when she sought advice from various medical men and hospitals.

I saw the patient first in consultation with my sister, Dr. Gertrude Keith, on Feb. 18th, 1903, the period having ceased the day before. The hæmorrhage had become so severe and constant that the patient had had to give up her occupation and, indeed, work of any kind, the slightest exertion not only increasing the hæmorrhage but bringing on faintness and intense breathlessness. These symptoms had been going on for some months. She was fit for nothing and if she even sat with her legs hanging down she became breathless. She stated that she had been treated at a London hospital for the last 14 months with ergot and other drugs and, though she had taken the medicines regularly, the symptoms had continuously increased.

The menstrual history for the last 12 months was as follows. She had been twice free from hæmorrhage for 14 days and once for 11 days, but beyond that the longest interval had been five days. Her general condition was certainly very bad, dyspepsia, constipation, swollen ankles, dilatation of the heart, and all the signs of extreme anæmia being present. On examination the cervix was found to be large and hard while the fundus was heavy and lying backwards. After washing the skin of the outside of the thigh with bichloride of mercury solution I injected one drachm of the 25 per cent. solution of iodipin into the cellular tissue. This dose was repeated every second day till March 3rd when the flow came on. This was an interval of 15 days. During the first day she noticed no difference in the amount of the loss, and as it was still excessive I gave the iodipin every day until March 6th, when the period stopped. It had thus lasted for four and a half days, the shortest and best she had had for a great many months, as, with the exception of the first day, there had been very little loss. The general condition had now much improved and she was able to do a little light work in her home. After the period was over the iodipin was again given every second day from the 7th to the 20th, when it was given every day as the patient felt that the period was coming on; however, it did not. The second period after commencing this treatment began on March 31st, an interval of 24 days; it lasted four days and was normal in amount. Since April there has been only one period; this also was normal and lasted four days. On examining the patient in the middle of May I found the uterus to be smaller and softer and the cervix normal.

This case shows the benefit of iodipin in certain forms of uterine hæmorrhage and, though it is perhaps unfair to praise it on the strength of one case, the paper of Dr. J. A. Shaw-Mackenzie in THE LANCET of April 4th, p. 958, also goes to show the value of this drug. Here was this patient reduced to utter helplessness by uterine hæmorrhage; every known drug in such cases had been tried for at least 14 months, and instead of getting better she was rapidly getting worse and she had become an invalid and a burden to others. There was nothing before her but a life of misery until the menopause came, probably three or four years hence, or an operation of more or less severity. Should the operation have been resorted to, owing to her enfeebled condition, a long convalescence was before her. Instead of this convalescence, within a week of commencing the hypodermic treatment by iodipin she was better and long before it was finished she was able to resume her employment and had become a useful member of society again. This is a point that is too often ignored and the weary weeks and months necessary for convalescence are forgotten when a patient is hurried into an operation. The result we ought to strive for is the cure of the patient with as little mutilation as possible and in a way that will put her on her feet soonest.

So far I have not tried iodipin in any case of definite fibroid tumour but my brother (Mr. Skene Keith) is getting good results in several cases.

Charles-street, W.

EMBOLISM IN ACUTE RHEUMATISM.

By A. BROWNLIE, M.B., CH.B.

ON March 16th I was called to see a boy, aged eight years, whom I found suffering from well-marked symptoms of acute rheumatism with endocarditis. This was his first attack. There was also considerable broncho-pneumonia of both lungs. At the apex and in the axilla a well-marked systolic murmur was heard. Pericarditis did not develop during the course of the illness. He had always enjoyed good health previously. On the 24th I found him in the following condition which, his mother informed me, came on quite suddenly during the night. There was complete right hemiplegia with aphasia, the right side of the face, arm, and leg being involved. The upper branches of the facial nerve were not affected as the orbicularis palpebrarum and frontalis muscles were intact, this fact clearly pointing to a supranuclear lesion. It was also noted that the voluntary movements of the face were more impaired than the emotional. Electrical tests were not applicable. The hypoglossal nerve was also involved, the patient being unable to put out the tongue straight, but it deviated toward the paralysed side. The arm was more completely paralysed than the leg. The thoracic and abdominal muscles were not involved. Hemianæsthesia was present and was more marked in the arm. The deep reflexes were increased in the arm and leg, ankle clonus being well marked.

With the exception of [illegible] bases of the lungs the patient's [illegible] iderably improved up to May 5th, [illegible] failure presented themselves, cyanosis being a prominent feature for two days before death which occurred on the 9th. The ultimate cause of death was evidently asthenia. There was no improvement in the hemiplegia and aphasia during the illness. No secondary contractions developed. Unfortunately, I was unable to obtain a necropsy.

Apparently, the case was one of embolism of the left middle cerebral artery with softening of the parts supplied by it, including the posterior part of the internal capsule. The case is interesting as, according to an eminent authority, embolism is rare in the acute endocarditis of rheumatism.

Lydney.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ST. GEORGE'S HOSPITAL.

A CASE OF SIMULTANEOUS AMPUTATION OF BOTH LEGS; *RECOVERY.*

(Under the care of Mr. G. R. TURNER.)

FOR the notes of the case we are indebted to Mr. Lawrence Jones.

A man, aged 35 years, was picked up unconscious on the railway line on Feb. 3rd, 1902, and was admitted into St. George's Hospital under the care of Mr. G. R Turner. On admission the left leg was found to be completely severed from the trunk at the centre of the calf and the right leg to be hanging by the peronei tendons and divided at a rather lower level. The only other injury was a small scalp wound. He was very much collapsed and had evidently lost much blood; the pulse was almost imperceptible, beating 150 to the minute, and the surface of the body was cold and sweating profusely.

The patient was taken to the operating theatre without delay and after a rectal injection of saline solution and brandy and the administration of 10 minims of liquor strychninæ subcutaneously, gas and ether were given and both legs were amputated simultaneously, the left by Mr. Turner and the right by Mr. Jones. The condition of the man was so critical that very little time was lost in rendering the skin aseptic. On the right side Stephen Smith's method through the knee-joint was employed, but on the left there was not sufficient sound skin for the flaps and the femur was divided just above the condyles. Hæmorrhage after removal of the tourniquet was very slight, the popliteal artery on each side being the only vessel that required a ligature. Large drainage-tubes were used and the patient was sent back to bed in a very collapsed condition. During the night slight improvement was shown under the free use of brandy and strychnine and saline enemata.

Progress was maintained until Feb. 5th when the patient vomited several times and complained of feeling hot. The temperature rose to 103° F. and the right stump began to look red and inflamed. In a few days there was a free discharge of pus on this side and a slough, of about the size of a half-crown, formed; on the left side there was also a small slough. The temperature gradually fell and the discharge lessened, the former reaching the normal on the 14th. The sloughs separated on March 4th and both wounds were soundly healed on April 1st, when the man was sent to a [illegible] tely, it has been found impos[illegible] charge from the home and so [illegible]

Remarks by Mr. JONES.—Recovery after amputation through both legs is a sufficiently rare event to warrant the publication of the above case. The main points about the case are, firstly, that the patient was subjected to as short an operation as possible, the amputations being performed simultaneously with this idea; and, secondly, the free use of stimulants before and after the operation. A good many cases of recovery after multiple amputations have been reported singly in THE LANCET; similar cases to the above have been published by Hewetson[1] and Stirling.[2] Successful cases of amputation through both legs below the knee-joint have been reported by Tyson,[3] Rundle,[4] O'Callaghan,[5] and Crompton.[6] But in the statistics of amputations in general the death-rate is high; thus out of 400 cases of amputation given by Dent and Bull[7] seven were dou[illegible] all; and [illegible] extremit[illegible] results[8] and six out of 13 in those of the Newcastle Infirmary.[9]

SWANSEA HOSPITAL.

A CASE OF DOUBLE GANGRENE WITH DOUBLE AMPUTATION AT ONE YEAR AND NINE MONTHS.

(Under the care of Dr. R. C. ELSWORTH.)

FOR the notes of the case we are indebted to Dr. Alan H. Muir, house surgeon.

A female, aged one year and nine months, was admitted to the Swansea Hospital on Jan. 31st, 1903, as a case of gangrene exhibiting a line of demarcation. The child was very ill with a temperature of 102° F. The pulse-rate was 160, irregular, and hardly to be felt. The respirations were 48 and all the usual signs of septicæmia were present. The stench was appalling. The right foot hung on by the posterior tibial vessels and the left foot was in a similar condition. Higher up the legs the skin was broken in several places and there were a few bedsores. Under chloroform Dr. Elsworth amputated both limbs below the knee, obtaining flaps in the best way possible, whilst Dr. Muir [illegible] The [illegible] ampu[illegible] anæs[illegible] The [illegible] patient [illegible] hypo[illegible] [illegible] ectum [illegible] were given every three hours for the first 24 hours. The child showed evidence of the severe toxæmic condition for some time. The temperature for the first eight days ranged from normal to 103°. The wounds healed by first intention and the little patient was discharged in a healthy state and became an inmate of Mr. Barnardo's Home. The condition seemed to have commenced as an acute epiphysitis.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

A Statistical Inquiry into the Prognosis and Curability of Epilepsy based upon the Results of Treatment.

A MEETING of this society was held on June 9th, Mr. ALFRED WILLETT, the President, being in the chair.

Dr. W. ALDREN TURNER read a paper on the above subject which will be found at p. 1650 of our present issue.

In the discussion which followed Dr. FLETCHER BEACH drew attention to the confirmation afforded by statistics to the general view that cases in which there is no hereditary history are the most likely to improve. The rule that the in[illegible] of heredity was more obvious when both parents [illegible] were epileptic was not limited to epilepsy but was a rule common to most hereditary diseases. The large proportion of confirmed cases which had commenced in early childhood was an interesting fact which awaited explanation. In regard to the duration of treatment after the last fit, there seemed to be a lengthening of the period during which it was considered desirable to maintain treatment before the disease could be regarded as cured.

Dr. G. E. **Shuttleworth** laid stress on the importance of statistical inquiry and gave particulars of a series of 340 cases of epilepsy in board school children, of whom 17 per cent. were fit to continue with the ordinary courses of instruction, 27·5 per cent. were able to profit by the modified instruction provided at special schools, and 40 per cent. required special institutional treatment. He referred to the popular opinion that epilepsy was favourably influenced by marriage and quoted a case which was strongly opposed to this view.

Dr. W. H. **Blake** had obtained good results in the treatment of epilepsy with sulpho-carbolate of sodium and believed that in many cases the stomach was the seat of peripheral irritation. In cases arising at puberty he relied on treatment with salicylate of sodium.

Dr. G. **Newton Pitt** emphasised the two facts that the proportion of cures appeared to be no greater since the introduction of bromides than previously, and that cases in which treatment failed after having been carried out for one year were not likely to be arrested. He asked for some rule as to the administration of bromides in cases in which there had been a remission for two years or more.

Dr. H. **Batty Shaw** drew attention to the similarity of Dr. Turner's statistics to those given by Sir William Gowers in regard to the frequency of a history of heredity in cases of epilepsy.

Dr. D. A. **Shirres** referred to the value of Babinski's sign as an indication of organic disease.

Dr. **Turner**, in reply, stated that he regarded the convulsions as only one symptom of the disease. A more important element was the mental factor and it was on this that the prognosis depended more than on the convulsive factor. He was inclined to attribute the intractability of epilepsy in early childhood to the special mental conditions of that period No general rule could be given as to the administration of bromides after a period of remission, but each case must be treated on its own merits. He considered that the statistics of the older observers should be regarded with caution in the absence of strict definition as to what constituted cure.

ISLINGTON MEDICAL SOCIETY.

The Medical Problems of Alcoholism.

A discussion on the Medical Problems of Alcoholism took place at the last meeting of this society for the session 1902–03, on May 18th.

Professor G. **Sims Woodhead** having been asked to open the discussion from a physiological and pathological standpoint, said that he was almost afraid to come before them with a tale that he had been telling so constantly for some time past. As, however, the discussion was to be a very general one it might perhaps be as well to have a few statements and suggestions which might serve as direction posts to indicate a possible line of discussion. It must be remembered that he approached the question from the point of view of a total abstainer—a convinced "teetotaler" if they liked—and therefore that he held stronger views on the subject of alcoholism than did many of his friends. He observed that in Germany and Switzerland, where men were now making a scientific study of the alcohol question, the physiologists, alienists, and some of their hygienists were also becoming convinced abstainers. He pointed out many experiments on the action of fairly strong alcohol on the protoplasm of plants and lower animals. There could be little doubt that the functions of such protoplasm were seriously interfered with and that ultimately, if the action were continued, marked degenerative changes were inevitably produced. It had long been suspected and even recognised that alcohol probably acting as a protoplasmic poison was in some way or other responsible for the fibroid condition met with in cirrhosis of the liver and more recently the association of fatty changes in the liver with the exhibition of large and continuous doses of alcohol had come to be looked upon as a commonplace of pathology. He should, however, leave these conditions as associated with the liver and see if they could not satisfy themselves that alcohol as a poison had a far more wide-reaching effect. Alcohol as a poison appeared to act in two ways. First it acted upon the protoplasm of the different cells of the body, causing in many cases a rapid degeneration, the evidence of which was manifested by the presence of fat in the cells of various organs, by cloudy swelling, by the disappearance of Nissl's granules, or by the stunting and clubbing of the twiglets on the long processes of the nerve cells and the moniliform thickening of these processes. At the same time the poison acting on the connective-tissue cells in the immediate neighbourhood, all much less highly developed and therefore more readily stimulated to proliferation, caused an increase of these cells near the seat of degeneration. In very chronic cases these connective-tissue changes appeared to be primary, but he thought that although they were the changes that were most prominent and permanent, they were in most cases quite secondary to, and dependent to some extent upon, the more important degenerative changes first mentioned. This might, however, be a primary change especially when occurring in the walls of the blood-vessels or in tissues richly supplied with lymphatics. In connexion with changes in this latter position he pointed out that alcohol not only impaired function in one direction, it had a direct effect in bringing about a retention of the waste products of the body in the tissues themselves and in the fluids in which these tissues were bathed. These waste products being of a highly poisonous nature acted along with the alcohol in increasing the extent and severity of the degenerative and irritant processes of which mention had been made. Reference was made to the experiments carried out in connexion with the study of the effect of alcohol in preventing the acquisition of a state of immunity against disease-producing micro-organisms and their toxins. Professor Woodhead thought that they were only on the threshold of this subject as yet, but sufficient information had been acquired to justify the hope that still more would ere long be garnered. The popular notion that the effects of large doses of alcohol, especially when repeated, could be slept off in a night was absolutely erroneous, as was also an idea that it was a valuable food. Its action as a poison was far more important than its action as a food, and although a spurt had been made in bringing up evidence as to the food value of alcohol it was daily becoming more evident that its rôle was pathogenic rather than nutritive. In conclusion Professor Woodhead quoted the experiments of Kurz and Kraepelin[1] to show that the foundations of chronic alcoholism might be laid sooner than is generally supposed They say: "A single dose of 80 grammes of alcohol (2⅘ ounces) does not pass off quickly and perfectly but leaves behind an after-effect which lasts more than 24 hours. If this dose is repeated in 24 hours a gradual increase of effect is produced which we must designate as the commencement of chronic alcoholism and this is already very evident after 12 days' action by a depreciation of faculty to the extent of 25–40 per cent."

Dr. J. G. **Glover** said that of all questions affecting the health of nations and patients few were more important than that of the careful and intelligent use of alcohol. He did not pretend to give any demonstration of the truth of his opinions. They had only the value of impressions produced on a practitioner with an average open mind who had lived long enough to have seen the profession swayed with violent waves of opinion in favour of different methods of treatment and who remembered, in respect of this subject, great discussions and great variations of practice and who had made it more or less an anxious study. He had been much impressed with the views of medical men entitled to be leaders. Sir William Jenner once said to him—Sir William Jenner was not a teetotaler—"I have come to the conclusion that if a man has to work hard he must eat moderately and drink nothing." The view of his friend and mine, the late Dr. Edmund A. Parkes, reached after careful experiments, was that only an extremely small amount of alcohol could be dealt with or used by the system. The burden of the testimony of their leaders before the Lords' Committee—and it could not be gainsaid—was in favour of extreme moderation and they agreed in warning the public that quantities which the "man in the street" might consider moderate often led to inconvenient and pathological results. But the quantities consumed were enormous and showed no satisfactory signs of decrease, though large sections of the community took none and others little; so that there must be large portions of the community who were actually soaked and saturated with alcohol. There was a very general consensus of opinion in the profession that alcohol was not necessary for the young, that in their diet it was misplaced, and that even in acute depressing diseases they needed none or little. On this last point, what made a great impression upon him (Dr. Glover) was the teaching of Sir William (then Dr.) Gairdner in 1864 as to the treatment of typhus fever in Glasgow with little or no alcohol, showing that he treated 189 cases below 16 years of age, of which only one patient died, a child aged six years, who was admitted into the hospital in a moribund condition. Dr. Gairdner reckoned that if these 189 cases had been treated on Dr. R. B. Todd's system instead of one death—and that in a moribund child—there would have been from 30 to 35 deaths. These cases were treated without stimulants except in the rarest cases. Of 406 patients admitted above the age of 16 years 17 2 per cent. died. Dr. Todd's mortality from typhus fever in London with huge quantities of stimulants was, according to Dr. Murchison, 25 per cent. In recent days the value of alcohol in the treatment of cardiac failure, in fever, and in other states had been much discussed. Dr. H. D. Rolleston, in an address to the North London had spoken as follows: "At on a *the* remedy for failing heart ir lered that it should be given with no niggardly hand in bad cases, but gradually, partly from observation of cases and partly from experience of others, especially from consideration of facts insisted on by Dr. Graham Steell—that cardiac dilatation is frequently in the otherwise healthy due to alcoholic excess—I have come to distrust the value of alcohol in large I hat disease the myocardium ic action of one poison and to suffer from the effects to rely on other means and chiefly on the hypodermic injection of strychnine." Dr. Glover had a strong conviction that as life advanced in those who had been in the habit of taking stimulants moderately the quantity should be decreased rather than increased. The prolongation of life depended much on the glands and the blood-vessels and alcohol was not good for the liver and the kidneys. It tended to destroy fine special cells, whether of the liver, the kidneys, or the brain, and to replace them by fibrous tissue; it senilised, it favoured degeneration, and impaired both the liver and kidneys, so that the system could not dispose of alcohol as it could when those glands were younger. The principle "*vinum lac senum*" was a most doubtful one, even when the wine took the form of whisky, according to the prevailing fashion. Here Dr. Glover wished to record his belief that the notion that whisky was a benign and innocent form of alcohol which young and old, healthy and gouty, might indulge in with impunity was one of the greatest delusions of this generation, and nothing was more striking than the hold that this delusion had of the more educated classes. He was told by one of his most intelligent patients, himself a commercial traveller of high character and great and long experience, that "commercial travellers drink more whisky than they ever did; they take it in the morning and at all times; and they all say that their doctors told them they might. Men used to take sherry with lunch and dinner and port after; now they take whisky instead." On the need for diminishing the amount of alcohol taken quote the opinion of so the late Sir William of this natural tendency—i.e., to diminish the proportion of stimulants taken as age creeps on and the nutritive processes decline in elasticity and power—are neglected or resisted by the unwary; they imagine that the quantity of stimulants which they tolerated with impunity, or even took with advantage, during the vigour of manhood cannot hurt them in later life. This, I believe, is an error, the commission of which tends to accelerate senile decay and to provoke fatally tending organic changes in the kidneys, liver, and arterial system." As a curious illustration of the defective intelligence of educated people in this matter he was often struck with the levity with which they might see gentlemen, even young gentlemen, enter a railway bar and toss off a glass of whisky, sometimes very little diluted and sometimes, he feared, raw. Even in Scotland, with all its centuries of education and its high religiousness, there was still little or no decline in the consumption of whisky; and there was some years back, if there was not still, a club known as the "Ten-tumbler Club," the members of which included some distinguished Scots. He had seen the *Times* recently quoted as to criminal statistics in Scotland: "Remarkable is the increase of crimes against property without violence, of malicious injury to property, and of drunkenness and disorder." The special committee on mental cases of the parish of Glasgow lately reported as follows: "The committee views with concern the fact that, of 565 admissions to the two asylums as insane and 213 to the poorhouse as cases of incipient insanity during the 12 months, no fewer than 259 or 33 per cent. have become chargeable to the parish through alcoholic indulgence. ...... In the large majority of cases the conditions and surroundings were good, and the earnings in 19 typical cases were from 19*s*. to 60*s*. per week. It is beyond question, further, that a large number of the insane sent to the asylums in previous years, and still inmates thereof, are cases of the same nature." Late reports of Dr. T. S. Clouston, of the Royal Asylum, Edinburgh, equally show the increasing influence of alcohol in the causation of insanity. Recent revelations as to physical defects and degeneration in the large English town populations as revealed by the tests applied to recruits were very painful reading. In the Manchester district only 1200 out of 11,000 men offering themselves for enlistment during the recent war were found up to the standard of what a soldier ought to be. In a report of Colonel Bennett, the inspector-general of recruiting, it was said that 75,750 men were medically examined last year. As many as 22,286, or, 29 04 per cent., were rejected for various ailments or want of physical development. Dr. Glover associated this physical with the excessive use of alcohol. It rful cause of deterioration, but s he could make out, to about working-man, affected gravely his own nourishment and that enditure were reduced even by many quarts of milk weekly or an extra room to live in. Too much was made of mere legislation for the treatment of habitual drunkards. This was beginning at the wrong end. They must begin with sounder views of diet for children, for young people, for patients, for servants, and for families generally. In America this was a subject of teaching in the schools, and so it should be everywhere with us if more intelligence was to be brought to reduce the amount of alcohol consumed by the nation, which so retarded social and physical improvement. There were some diseases in which alcohol, according to popular views, was beneficial—e g., consumption. In a very interesting article Dr. W. H. Dickinson[2] showed conclusively from the clinical and pathological records of St. George's Hospital that the free use of alcohol by persons in the liquor trade did not prevent phthisis, as even so acute an observer as Dr. Walshe thought, but promoted it. As an instance of the old ideas in the treatment of carbuncle it was a common practice to push the administration of stimulants, especially port wine. He (Dr. Glover) hat such treatment was a vas common in oldish people, and whose organs and blood-vessels were older than their years, sometimes having sugar or albumin in the urine. They were easily overpowered with stimulants and were made worse. Such cases were far better treated with rational diet and local antiseptic dressings with or without incisions. The treatment of fevers by Sir William Gairdner he had already referred to. Perhaps the malpractice and folly of the indiscriminate prescribing of stimulants could be best understood by considering for a few seconds the careless use of the word "weakness" by the public and too often sanctioned by the profession. Debility or weakness might mean *anything*; it meant actually nothing. But it was the foundation upon which much of the abuse of stimulants actually rested. The facile diagnosis of "only weakness" usually covered ignorance or carelessness. A patient came to them complaining of feeling weak. He had, perhaps, been taking on his own account what he called "strengthening" things—"nourishing stout," port wine, or rump steaks. All the time he had probably some considerable disorder—catarrh, some error of metabolism, or some block of digestion or assimilation. His tongue might be furred or his urine loaded with lithates or slightly albuminous, or he might have touches of rheumatism or gout. The correction of these states was the obvious treatment and all the so-called tonics in the Pharmacopœia with the soundest whisky and the most nourishing stout were so many delusions to which the intelligent practitioner should be no party. That was the real tonic treatment which aimed at the correction of latent or obvious errors in the working of the system or of its individual organs. Alcohol might easily aggravate such evils. Dr. Glover then spoke of beer alcoholism in Germany and in England and of intemperance of women. In Islington in the last ten years there had died from cirrhosis of the liver 286 men and 300 women. Dr. Glover ended by saying that he was not a teetotaler and that he did not think that teetotalism was a practical doctrine for a northern nation. Certainly alcohol could not be dispensed with as a remedy, or by some persons as a part of diet. All the same, he regarded the present consumption of it as simply disastrous and discreditable to the public intelligence. All the great European nations were showing a wise anxiety on this subject. On the whole, he had a low opinion of alcohol in any but the lightest form and quantity and thought that there could be no doubt that recent research and careful clinical observation pointed to the wisdom of greatly reducing its consumption with food, never using it casually or carelessly and prescribing it with more precision and with a high sense of medical responsibility. The profession of France, Germany, and Russia were exercised much on this problem and that of Great Britain would not be behindhand.

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[1] British Medical Temperance Review, May, 1903, p. 159.

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[2] Occasional Papers, 1[illegible] to 1[illegible].

Dr. ALEXANDER MORISON was glad that Professor Woodhead did not exclude a therapeutic use for alcohol from consideration. The effect of alcohol on the higher cells of the body was shared by other agencies of admitted therapeutic value as strychnia, opium, and belladonna. The therapeutic use of drugs was frequently and admittedly an intoxication with them, or, to use the language of the clinician, it was generally necessary to induce in some degree the physiological action of a drug before we could hope to influence the organism beneficially. Did the argument apply to alcohol in health or in disease? They did not use drugs in health or endeavour to induce in some degree their physiological action when a person was well. But drugs were not food, which alcohol in some measure was. Still they could not beneficially live on alcohol and it might be stated generally that a healthy man needed no alcohol even when fatigued, for the fatigue of a healthy man would soon pass off with rest, ordinary food, and natural sleep. A man who led a strenuous life and was free from organic disease might, however, be fatigued to that extent at which we had apostolic authority for believing that a little wine might be good for the stomach's sake, for in such circumstances it might aid digestion and relieve vascular tension. The danger of this was that moderation was not widespread. There was risk of excess fostered in many ways by social customs and by commercial interests. Unfortunately the wise counsels of the physician were not likely to be taken seriously by alcoholic Philistines. It was not as a stimulant to the digestive process that alcohol found its most serious application in medicine. It was as seriously combating threatened cardiac failure that alcohol found its most useful applications in medicine, in serious and sudden emergencies, in the prolonged strain of exhausting diseases, and in the shock, either of mental distress or of severe pain either in the heart itself or in some other region reacting on the heart. In such circumstances half an ounce of brandy, undiluted or little diluted, was most useful, acting directly upon the nervous regulative apparatus of the heart. Dr. Morison showed by slides the rich endowment of the heart with peripheral nerves. He thought that they should beware, lest for political, economic, or philanthropic reasons they held their hand in the practical field of rational therapeutics.

Dr. J. L. HEWER remarked that it was interesting to hear that the early nerve changes as demonstrated by the microscope could be absolutely recovered from, but he would like to know the definite point at which recovery was impossible. They must all know the patient who took nearly a bottle of whisky a day with apparent impunity. A great deal must depend upon individual idiosyncrasy.

Dr. J. FORD ANDERSON said that he would like to know if the moderate drinkers—those who like himself had been in the habit of taking a glass of wine with their meals—would suffer the degeneration of cells which Professor Woodhead had mentioned. He understood that most of the observations on alcoholic poisoning in man had been made in pronounced cases of the alcoholic habit, and if this were true it would be misleading. Dr. Anderson further remarked on the almost universal use of alcohol by nations and on the general distribution of alcohol in the vegetable kingdom and thought that people could not avoid partaking of alcohol sooner or later if they used as a diet the fruits of the earth. He cited a case in illustration where fermenting grapes caught fire when a lighted match was applied. He regarded alcohol in carefully regulated doses as a food and as a producer of force in the malnutrition and malassimilation of chronic disease and in the exhaustion of acute diseases. When alcohol was administered in such cases it not only produced direct stimulation but it underwent combustion and the tissues of the patient were spared, and he cited as an example cases of pronounced anæmia where iron and feeding seemed to fail until port wine or an equivalent was ordered. Alcohol also in health generated energy when to use the French proverb, "Il n'y a que le premier pas qui coûte"; when the work was really beyond their strength but yet must be done a glass of wine often overcame the initial difficulty of starting and the vital powers would carry them through. This did not seem, however, to be true when the muscles were tired, muscular fatigue being more relieved by tea than by alcohol. Dr. Anderson also expressed disapproval of the prevailing laxity in ordering spirits without specifying the quantity, especially to young people who were likely to end by taking more than the physiological dose.

Mr. T. D. JAGO said that he was a teetotaler but he was quite alive to the value of alcohol, especially in obstetric and other emergencies.

Professor WOODHEAD by way of reply to Dr. Morison's point that alcohol in injuring the protoplasm only did what strychnia, opium, and other drugs, confessedly useful medicines, did, agreed, but he pointed out that whereas they were prescribed only as drugs in precise quantities and for a limited time alcohol was used loosely and after the occasion for prescribing it had passed.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

Adjourned Discussion on (1) the Care and Treatment of Persons of Unsound Mind in Private Houses and Nursing Homes, and (2) Lunacy and the Law.

A MEETING of this association was held on May 15th under the presidency of Dr. JOSEPH WIGLESWORTH.

Dr. HENRY RAYNER resumed the adjourned discussion of two papers read at the meeting held at Derby County Asylum on Feb. 12th—namely: (1) the Care and Treatment of Persons of Unsound Mind in Private Houses and Nursing Homes, by Dr. Ernest W. White;[1] and (2) Lunacy and the Law, by Dr. T. Outterson Wood.[2] Dr. Rayner said that the first point was the desirability of having early care of mental cases, and the second point was that such care should be efficient. The legalisation of the treatment of early mental cases might be regarded as fairly settled and it was to be hoped that the Lord Chancellor would succeed with his Bill at the third attempt. Dr. Rayner, however, feared that the privilege might be abused unless some limitation were placed upon its use, though the basis of such limitation was matter for discussion. The persons most suitable to take care of early cases were those who had had considerable asylum experience; the next best persons were old asylum officers; and after them ladies who originally had experience in nursing their own friends and then had taken to nursing work. On the other hand, general nurses were too stereotyped in their habits to be successful with mental cases. Persons without experience should never be allowed to have the care of those difficult cases. He had seen mental cases treated with care and kindness but yet to their detriment;

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[1] THE LANCET, Feb. 14th, 1903, p. 427.
[2] THE LANCET, Feb. 28th, 1903, p. 577.

sometimes, again, they were allowed to be wet and dirty and to masturbate to any extent With regard to the limitations referred to, it was possible that the Commissioners in Lunacy might be inclined to grant licences to persons who would take charge of early mental cases, but his own feeling was that that association, which had done so much in the matter of training attendants at asylums, might set to work, by examination, and perhaps by teaching, to furnish the public with a trustworthy body of people to have charge of incipient cases of insanity

Dr L A. Weatherley (Bath) said that the first 14 years of his professional life were devoted largely to the care of the insane in private dwellings, and in 1880 he read a paper, which was discussed at two meetings of the association, on the same question He published the paper as a book and dedicated it to the late Earl of Shaftesbury In that book he proposed to make the system of single treatment of the insane a definite legalised system—i e, to eliminate those who, simply for payment, took patients into their houses when they had no special knowledge of mental disease. He advocated the issuing of licences to persons who should have such care, not by quarter sessional districts, but by petty sessional districts, as the latter would know more of the people in their particular area In a letter written to him the late Earl of Shaftesbury said that he did not object to the principle of placing the insane in private care, but were any relative of his afflicted with insanity he would place him or her in a house along with many others in preference to any retreat for a single patient Almost all reformers in lunacy matters were so carried away by the claims of the patient that they totally forgot the claims of the public who had a right to security from danger and annoyance Sir William R. Gowers [3] in his paper read before the association, seemed to want to make it possible for people to be placed under the care of almost anyone so that what was called the stigma of insanity should not rest upon the patient and his family, but Sir William Gowers probably forgot that the majority of those even who were sent to private houses were not sent with their free will, but against it A great deal depended on the kind of person with whom the patients were to be placed He (the speaker) thought that the voluntary boarder system ought also to be very widely extended and that each asylum should have a separate department and dietary for private patients

Mr J F Briscoe recommended the passing of a motion stating that the association disapproved of the system now practised with regard to single care and private nursing homes, and suggesting to the authorities some stringent methods with regard to the better regulation of single care cases nursing homes, and other places for persons of unsound mind

Dr David Bower reminded the members that the association had done all that it could to get the Scotch provision inserted into the new Bill But, on the other hand it was very necessary not to make the treatment of lunacy absolutely a matter of free trade, and it was desirable to have such precautions as those laid down in the two papers under debate

Dr G Savage said that a large proportion of friends would not have their relatives certified, and until by some sort of police action, they could be forced against their will something must be done in the way of recognising single homes He agreed that there should be a kind of notification of patients and of homes As an illustration of the qualifications of some of the persons who wished to have patients in their houses he mentioned that a parson s wife had written to say that unless he could send a patient who could pay £1000 a year and would cause no trouble her husband would have to give up his carriage as he had met with heavy financial losses In some of the cases in which application had been made to him by medical men to have cases for private care the men were well qualified but the houses were unfit for various reasons such as being semi-detached and having no garden In another case the relatives said that a medical man was no good—they would have a nurse and run the risk They did so and the patient committed suicide

Dr H F H Newington (Ticehurst) said that Dr White s paper might be regarded as an answer to that of Sir William Gowers who seemed to want to tear down the provisions of the lunacy law too much and to allow of the treatment of excessive numbers of patients in private houses In some cases, of course, good results were more likely to follow by placing patients in good hands under private care than in public institutions but Sir William Gowers went much further than that

Dr Douglas (London), Dr F W Edridge Green (Hendon) Dr A J Alliott, Dr Henry Forbes Winslow, and Dr W Lloyd Andriezen also took part in the discussion, after which Dr White and Dr Wood replied to the points raised by the various speakers

EDINBURGH MEDICO CHIRURGICAL SOCIETY

Ichthyosis —Roentgen Rays in the Diagnosis of Lung Disease —The Nauheim Bath —Sialogogues

A meeting of this society was held on June 3rd, Dr C E. Underhill, Vice President, being in the chair

Dr D Chalmers Watson showed a case of Ichthyosis in a girl who had benefited considerably by treatment In December she presented an entire absence of hair over the body, while that on the head was scanty At the present time hair was growing on its normal situations on the arms and on other parts and that of the head was luxuriant. Dr Watson also exhibited microscope slides showing the Histological Appearances of the Skin of a Seventh month Fœtus—a sister of the above mentioned case of ichthyosis He also exhibited a case of Rheumatoid Arthritis with several interesting features, as pigmentation, tremors cachexia, and tender deep seated areas in the muscles, chiefly of the neck

Dr D Lawson (Nordrach on Dee) read a paper on Roentgen Rays in the Diagnosis of Lung Disease and illustrated it with a large number of lantern slides The paper will shortly appear in full in The Lancet —In the discussion which followed Dr Alexander James Dr F Gardiner, Dr W Allan Jamieson, Dr G Lovell Gulland, Dr D C A McAllum, and Dr Norman Walker took part

Dr A. D Webster contributed a paper on the Saline Effervescing Bath (Nauheim Bath) and Resisted Exercises in the Treatment of some Heart Cases He said that the special treatment was indicated (1) in enfeebled states of the heart such as might be due to physical strain to psychical stress or worry, and to toxins, and (2) in some cases of valvular disease He discussed the effects of the special bath as regards the temperature of the water, the dissolved salts, and the carbonic acid gas, comparing them with the cardiac remedies—arsenic, strychnine the nitrites, and digitalis He said that the temperature of the bath in its action on the heart corresponded to digitalis The salts in their action on the heart and skin corresponded to arsenic and in their action on the vessels corresponded to the nitrites The carbonic acid gas by its stimulation of the sensory nerves corresponded to strychnine The bath acted as a powerful stimulant both thermic and mechanical with special influence on the vagi The general effects of a course of these baths were a sense of well being good sleep, improved appetite, increased warmth of the skin and increase of the body weight

Dr W G Aitchison Robertson read a paper on Sialogogues and their Therapeutic Employment. It was well known that certain substances and especially those which were pungent to the taste when chewed, caused a rapid flow of a watery fluid into the mouth Portions of each of the substances investigated were masticated for a period of 30 minutes, the amount of saliva being collected and measured every two minutes In this way it was noted whether the flow was constant and uniform or whether it varied in its amount, alkalinity, or starch-converting power The alkalinity of the saliva was estimated in each case by means of very sensitive litmus paper The starch converting power was estimated by allowing a measured quantity of the saliva secreted under the stimulation of each agent to act upon a measured quantity of starch mucilage for a definite period At the end of this interval the amount of sugar produced and the degree of dextrinisation of the starch which remained were determined It was found that rhubarb, mustard, pimenta cinnamon, and marsh mallow called forth but a relatively small increase in the salivary flow, whilst such agents as calumba, orange peel, gentian, cinchona, and cusparia induced a much more copious secretion. Heading the list were pyrethrum, colchicum, ginger, horse radish, and black pepper. The alkalinity of the saliva was found to vary within such small limits that for practical purposes it might be said to have been uniform. As regarded the starch-converting power of the saliva it was found that catechu, rhubarb, alum, and borax entirely inhibited the action of the salivary ferment. On the other hand, most of the drugs which induced a copious flow of saliva exerted what might be termed a normal sialocinetic action—that was, that the saliva secreted under their stimulation acted in a normal way on starch mucilage. For practical purposes it might be considered that the useful sialocinetic agents were confined to the vegetable kingdom. Many individuals found difficulty in the digestion of starchy food and such cases could often be benefited by slow mastication and proper insalivation of the amylaceous constituents of the meals. Dyspeptics were also advised after meals to chew for ten minutes or so one or other of the more potent and palatable sialogogues. In hyperchlorhydria the onset of pain was usually delayed until some time after partaking of a meal. It was, therefore, desirable to secure the digestion of the amylaceous constituents of the meal before the free acidity checked proteolysis. This could be done by increasing the flow of normal saliva, which, also, by its alkalinity delayed the presence of free acid. In many cases of feeble gastric digestion the fault was due merely to a diminished activity in the gastric juice, both hydrochloric acid and pepsin being present in less than their normal amounts. When saliva was introduced into such a stomach it had the effect of stimulating a more copious as well as a stronger secretion. Thus an increase in the saliva which was introduced caused a larger amount of gastric fluid to be secreted. In many such cases Dr. Robertson had found that great benefit was produced by a stimulation of the salivary secretion by means of palatable vegetable sialogogues, such as ginger, gentian, peppercorns, or cusparia. In certain cases other means of treatment must first be employed, as, for example, multiple fermentations in the stomach must be treated by lavage and the exhibition of antiseptic agents, such as salol, salicylate of bismuth, or naphthol.—Dr. Underhill, Dr. H. M. Church, Dr. G. Keppie Paterson, Dr. Webster, and Dr. W. Craig took part in the discussion.

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[3] The Lancet Nov 2nd, 1902, p 1309.

Clinical Society of Manchester.—A meeting of this society was held on May 20th, Dr. T. A. Helme, the President, being in the chair.—Mr. J. E. Platt made a communication upon Bronchocele, especially from the point of view of treatment. He briefly reviewed the various forms of chronic bronchocele and referred to a few points in their etiology, pathology, and symptomatology. In cases of parenchymatous bronchocele he had found considerable benefit from the administration of iodine and potassium iodide internally, but these and all other internal remedies were practically useless in adenomatous cases. In the latter the only effective treatment was operation with enucleation of the tumour. The general parenchymatous enlargement of the gland which often accompanied adenoma usually subsided after the removal of the adenoma. In simple parenchymatous cases which resisted medicinal treatment operative measures should consist in partial excision of the gland or scooping out of its interior. Mr. Platt also referred to the symptoms of absorption of thyroid secretion which sometimes occurred after operation and showed a number of charts illustrating special observations upon this point.—Dr. Arnold W. W. Lea read a paper on Acute Recurrent Hydronephrosis and related the notes of four cases treated by operation. The condition was characterised by recurrent attacks of acute abdominal pain with severe constitutional disturbance and associated with rapid swelling of the kidney and temporary hydronephrosis. It may be found along with mobile kidney, but extreme mobility of the kidney often existed without any evidence of hydronephrosis. Mr. W. Bruce Clarke in 1893 described this condition as "acute renal dislocation" and considered that the kidney slipped downwards beyond the costal margin. In the cases described by Dr. Lea the reduction of the kidney even under anæsthesia was impossible owing to the great increase in the size of the organ. The cause of this condition was temporary ureteral obstruction. Slight degrees of ureteral obstruction were common in mobile kidney, producing some hydronephrosis, but in the acute cases an additional element was introduced —viz., sudden kinking or torsion of the ureter. Valvular folds were frequently present in the upper part of the ureter near the renal pelvis. Sometimes also strictures occurred from adhesions, traction by bands, or more rarely by a calculus. Reference was made to an interesting paper by Barg of Paris,[1] who had examined the ureter and renal pelvis of a large number of newly born infants. The pelvis of the kidney showed great variation in size and shape, and the angle of insertion of the ureter might be vertical or almost horizontal. The form most liable to lead to hydronephrosis was a voluminous renal pelvis with the ureter entering at an acute angle. In these cases, which were rare, slight degrees of movement of the kidney, such as might be produced by sudden strain or effort, led to obstruction of the ureter and acute hydronephrosis. Other factors, such as congenital stenosis, valves, and twists, also conduced to it. The production of recurrent hydronephrosis was largely dependent on the congenital disposition of the ureter and renal pelvis. In these cases slight descent of the kidney, not recognisable clinically, might lead to acute ureteral obstruction. The symptoms might be very severe. In one case the attacks came on at frequent intervals without obvious cause and were accompanied by intestinal obstruction due to displacement of, or traction on, the colon. A distinct tendency existed for the attack to come on just before a menstrual period. This occurred in two cases and might suggest a pelvic cause for the symptoms. The attacks might last three or five days and then within a few hours the kidney returned to its normal size and all the symptoms disappeared. In the intervals the patients might be well but they were usually neurasthenic and had constant aching in the loin. The diagnosis was simple if a definite tumour could be felt, but in the earlier stages of ureteral obstruction with dilatation of the pelvis the symptoms might be very severe in the absence of any definite tumour. The treatment must be mainly surgical. The kidney must be exposed, and in the great majority of cases nephrorrhaphy effected a permanent cure. In slight cases it was unnecessary to drain the pelvis. If, however, the kidney was hydronephrotic the pelvis must be incised and a careful examination made of the upper end of the ureter. If no obstruction was found the pelvis might be sutured and the kidney fixed. Nephrorrhaphy was carried out by Dr. Lea in all the cases. In three the pelvis of the kidney was opened and in one case it was thought advisable to drain for a few days. In each instance a permanent cure was obtained. It was important not to delay operation too long, as otherwise the kidney might be irretrievably damaged. There was also a great tendency to the development of pyonephrosis in these cases, due to an ascending infection from the bladder or possibly secondary to adhesions forming between the colon and the perirenal tissues.

Dermatological Society of Great Britain and Ireland.—The annual meeting and conference of this society took place on May 27th. The following gentlemen were elected as officers for the ensuing session:—President: Dr. J. H. Stowers. President-elect: Dr. H. Waldo. Vice-Presidents: Dr. P. S. Abraham, Dr. R. L. Bowles, Dr. James Galloway, Dr. A. J. Harrison, Dr. J. F. Payne, Dr. H. H. Phillips-Conn, and Dr. P. H. Pye-Smith. Treasurer: Dr. C. H. Thompson. Honorary secretaries: Mr. A. Shillitoe and Dr. W. B. Warde. Council: Dr. Wallace Beatty, Dr. H. A. G. Brooke, Sir Alfred Cooper, Dr. H. Radcliffe Crocker, Dr. A. Eddowes, Mr. Willmott H. Evans, Mr. W. T. Freeman, Dr. A. J. Hall, Dr. E. G. Graham Little, Mr. George Pernet, Mr. George W. Sequeira, and Dr. Edward Stainer.—Dr. William Thomas Corlett, professor of dermatology and syphilology, Western Reserve University, Cleveland, gave an address on the Present Epidemic of Small-pox throughout the United States, together with a short consideration of the different types of the disease, their recognition, and some of the influences of vaccination, illustrated by lantern slides. By way of introduction he called attention to the similarity in the methods employed in combating the disease both here and in America. To the great Sydenham they were indebted for placing at rest, he trusted for all time, the uncertainty which existed concerning the identity of certain affections—e.g., chicken-pox, measles, &c.—which presented, it must be acknowledged, certain fundamental characteristics which entitled them to be placed in a group by themselves—"the acute infectious exanthemata." He next spoke of the freedom from small-pox which the aborigines of the American continent enjoyed previously to its discovery by Columbus. The disease was carried to the island of San Domingo in one of the subsequent voyages, thence it spread to the mainland carrying consternation and death to the natives who, scattering far and wide, spread the new disease far into the interior. Small-pox was not unknown to the early settlers of New England and a few years after Jenner's great discovery in 1798 vaccination was practised in the infant republic of the New World. Attention was next called to the variability in severity of the different epidemics that from time to time had swept over the country, as well as to the various clinical types of the disease, the importance of which, the speaker thought, could not be too strongly emphasised. The epidemic of 1898 appeared, within a few months, in various States remote from each other. Thus in Boston and New York the disease assumed a virulent form and was from the first attended by a high mortality, while in Philadelphia, only about 100 miles away, it was so mild that the health authorities experienced difficulty in maintaining strict quarantine measures. In Ohio so mild was it that a correct diagnosis was not at first made, the disease being regarded as a severe form of varicella. Into Boston and New York small-pox was thought to have been introduced from Europe, and into Ohio from Cuba, where it was endemic, *viâ* the Southern States. A series of photographs, illustrating the various types of the disease, &c., was thrown on to the screen. Two factors, Dr. Corlett thought, should be taken into account in controlling or modifying small-pox: (1) vaccination; and (2) the as yet unknown condition of the variola virus itself. By vaccination small-pox might be stamped out of any community, as had been done in Germany. But it must be impressed on the laity that revaccination at least every ten years, or oftener during epidemics, alone insured complete immunity. As to the second factor, all they knew was that the epidemics varied greatly in severity, independently of the influence of vaccination. In the Cleveland epidemic the death-rate increased from about one-half of 1 per cent. for the first year to nearly 20 per cent. in the third and fourth years. The virus was supposed to have developed more virulent properties by successive transplantations. In conclusion Dr. Corlett spoke of the exclusion of the actinic rays of the solar spectrum in the course of treatment. The exclusion of daylight must be complete from the beginning of the eruption. To insure this Finsen recommended the suspension of a sensitised photographic plate in the room. The exclusion of the actinic rays in no way influenced the variola virus itself.—Dr. Harrison moved, and Dr. Radcliffe Crocker seconded, a very cordial vote of thanks to Dr. Corlett for the most interesting address which he had given to the society.

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[1] Revue de Chirurgie, February, 1902.

GLASGOW SOUTHERN MEDICAL SOCIETY.—A meeting of this society was held recently under the presidency of Dr. D. Macgilvray. Dr. Bruce gave a most interesting account of his experiences in South Africa during the war which was much appreciated. At the conclusion he was cordially thanked for his lecture.—Dr. G. H. Edington then showed:—1. An Appendix which had been removed from a Right Femoral Hernial Sac. The appendix was tightly grasped at the orifice of the crural canal and protruded one inch into the sac. The sac was distended with fluid and was of about the size of a Tangerine orange and contained no other viscus. The appendix was pulled down, ligatured, and cut away. The stump was touched with pure carbolic acid and returned into the abdomen. The canal was closed by one suture passing through Poupart's ligament and the pectineal fascia The patient was a woman, multiparous, aged 50 years, and had no signs of strangulation, but she had complained of swelling in the groin, pain, and uneasiness. The swelling was irreducible and had no impulse on coughing. The duration of the illness was four days. She made an uninterrupted recovery. 2. A Sequestrum containing Temporary Molars and one Biscuspid Crown from the left upper jaw of a boy, aged six years, who had a severe attack of typhoid fever ten months previously. The necrosis followed sloughing of the cheek in the sixth week of the illness, but the sequestrum was not removed until eight months later. While in hospital a similar sequestrum had come away from the right upper jaw. The symmetry and the part of the jaw affected were in agreement with Salter's description of exanthematous jaw necrosis occurring after scarlet fever, measles, and small-pox. Dr. Edington having shown other specimens of a surgically interesting kind was cordially thanked for his demonstrations.

WINDSOR AND DISTRICT MEDICAL SOCIETY.—A meeting of this society was held on May 27th, Mr. W. B. Holderness, the President, being in the chair.—Cases and specimens were shown by Dr. G. L. Eastes, Mr. J. W. Gooch, Mr. W. H. Beresford, Dr. G. E Hale, Dr. F. E. Wood, and Dr. C. R. Elgood.—Dr. Harry Campbell made a communication on Respiratory Exercises and Thoracic Mechanics. He pointed out that the position of the chest most favourable to the pulmonary circulation was that of full inspiration, first, because in it the lungs were most stretched and their suction action on the heart was at its maximum; and secondly, because the "bed" of the pulmonary circuit being widest in the inspiratory position the resistance in the pulmonary circuit was at its minimum. Hence, in all cases of dyspnœa the thorax was maintained in the inspiratory position, physiological breathlessness, cardiac dyspnœa, spasmodic asthma, pneumonia, pleural effusion, and pneumothorax being instances in point. This truth did not seem to have been recognised by clinicians. Dr. Campbell said that much the most satisfactory way of developing the lungs was by the induction of physiological breathlessness, as by running, jumping, skipping, and the like, and not by gymnastic exercises calculated to over-develop the muscular system and to render the thorax muscle-bound. He further contended that writers on emphysema had failed to furnish a satisfactory explanation of the enlargement of the chest in this disease. The enlargement in question was to be explained first, by the necessity for a widening of the pulmonary vascular "bed" owing to the destruction of the pulmonary capillaries; and secondly, to the need for a tightening or tuning up (so to speak) of the relaxed pulmonary tissue so as to maintain as far as possible the pulmonary suction in the heart at its normal level.

Reviews and Notices of Books.

Obstetrics: a Text-book for the Use of Students and Practitioners. By J. WHITRIDGE WILLIAMS, Professor of Obstetrics, Johns Hopkins University; Obstetrician-in-chief to the Johns Hopkins Hospital. With 8 Coloured Plates and 630 Illustrations in the text. London and New York: D. Appleton and Co. 1903. Royal 8vo, pp. 845.

THE appearance of a work on obstetrics from the pen of Professor Whitridge Williams is a matter for congratulation. The amount of research which he has carried out upon many subjects in this field of medicine and the high character of all the work emanating from the Johns Hopkins University render the book one of special interest. The manual, although a volume of some 845 pages, is easy to read not only because the author has a pleasing style but also because he has arranged his material in a number of relatively short and concise chapters. To each of these a bibliography is appended containing a list of the most important original articles upon the subject treated of and there is a refreshing absence not only of old and obsolete theories but also of the old and obsolete drawings which even at the present time are so often handed on from one text-book to another. The book is profusely and well illustrated with eight coloured plates and 630 illustrations, almost all original.

In considering racial differences in the pelvis the author points out the interesting fact that contracted pelves occur several times as frequently amongst black as they do amongst white women (21 per cent. to 7 per cent.), while the frequency of operative deliveries is greater amongst the latter. This would appear to be due to the small size of the children's heads amongst the negroes. The description of the changes that occur in the decidua and the imbedding of the early ovum is particularly good. Professor Whitridge Williams is inclined to agree with Graf Spee's view that the origin of the amnion in the early human ovum is by an inversion of the wall of the original blastodermic vesicle, a view which has been confirmed by Selenka's observations upon monkeys and which is admirably illustrated by Spee's drawings of his earliest human ovum with an embryonic area 0·4 millimetre long. The account of the development of the early placenta is the best that has so far appeared in any text-book in the English language.

The author's views upon the antiseptic precautions necessary to be taken in the conduct of labour are very thorough. He advocates the permanganate of potassium and oxalic acid method of disinfecting the hands, and recommends that, before applying forceps, the genitalia should be shaved. We are afraid that women in this country are hardly educated up to this point of surgical cleanliness. We, however, entirely agree with the advisability of all such precautions being taken, but the difficulties of carrying out such an elaborate preparation in private practice are made a little too light of.

In the chapter upon the forceps it is recommended that it should always be applied to the sides of the child's head, the position of the lowest ear being first defined, and in the management of unreduced occipito-posterior presentations the application of the forceps to the sides of the head and the rotation forwards of the occiput after it has reached the pelvic floor are advocated. The forceps is then removed and re-applied. It is interesting to note that the author does not commend the operation of symphysiotomy. He does not agree with the claim that is made that it is a suitable operation for the general practitioner to carry out, and sums up his remarks upon the subject by writing "that he does not expect to perform symphysiotomy under any circumstances and believes that the present enthusiasm for it will eventually disappear." This view of the matter is one that has found a good deal of favour in this country and at the present day there is hardly a single English obstetrician of note who is an enthusiastic supporter of this operation. On the other hand, the induction of premature labour, a method of treating cases of contracted pelvis which is constantly being practised amongst us, finds but little support in this work. It must be remembered that the fœtal mortality is undoubtedly high, varying as it does from 12 to 45 per cent. and when we read that Professor Whitridge Williams has had a fœtal mortality of only 13 per cent. in a series of 278 cases of contracted pelvis in which premature labour was not induced the position which he takes up is in part explained. Bar, who has had a large experience of the induction of premature labour, has practically abandoned it and recommends the performance of Cæsarean section at term if spontaneous delivery does not occur. With this view the author is in agreement and he would limit the induction of premature labour to cases where the pelvis is normal but the child is abnormally large. If we turn to the account of the treatment of cases of contracted pelvis, a section in which the illustrations are especially good, we find that in flattened pelves with a conjugate diameter varying from 8 9 to 7·5 centimetres the performance of Cæsarean section or symphysiotomy is recommended if, after some hours of efficient second-stage pains, there is no likelihood of engagement of the head and the patient is in a good condition and in a well-regulated hospital. If, on the other hand, the patient is not placed under such favourable conditions and spontaneous delivery does not occur forceps should be applied obliquely to the head and a few tractions should be made. If the head shows no tendency to advance craniotomy must be performed. The method of treatment advocated is all in favour of a decided advance in the number of cases subjected to Cæsarean section so long as the patient is under favourable conditions, a plan of treatment which Professor Whitridge Williams thinks is likely to lessen very markedly the fœtal mortality while the maternal mortality will be reduced to a minimum.

The chapter upon Puerperal Fever contains an excellent summary of the bacteriology of the disease and in discussing the treatment the employment of the curette is unhesitatingly condemned. The administration of anti-streptococcic serum is not held to be of much value in the treatment of these cases, nor does the author think that the practice of removing the uterus with the idea of limiting the further spread of the poison is an operation likely to be at all commonly practised or of much avail.

The work can be recommended not only because it is well up-to-date, but because many of the methods of treatment advocated, although not in common practice at the present time, are likely to be the current teaching of the future.

Handbook of Climatology. By Dr. JULIUS HANN. Part I., General Climatology. Translated with the author's permission from the Second German Edition, with additional References and Notes, by R. DE COURCY WARD, Assistant Professor of Climatology in Harvard University. New York: The Macmillan Co. (London: Macmillan and Co). 1903. Demy 8vo, pp. xiv. + 437. Price 12*s.* 6*d.* net.

PROFESSOR HANN'S well-known "Handbuch der Klimatologie" first appeared in 1883. The present volume is an excellent translation from the second edition of 1897 of the portion dealing with general climatology. It forms a complete work in itself. Numerous references have been added and some changes have been made in the text with a view to bringing the subject up to date, but the translator points out that every change has been made with the full approval of Professor Hann. The translator likewise states that though some new examples of climatic phenomena have been added, chiefly from the United States, most of the examples given necessarily still relate to Europe, because the climatology of that continent has been studied more critically than that of any other region. Professor Hann's work certainly deserves to be better known in England and America than it is at present and the translator is to be congratulated on the English edition now offered to the public.

It would be impossible to discuss much of the work in a short review. The sections on winds are of great interest to medical men. Though all agree that a certain amount of movement of the air has a beneficial effect in maintaining the purity of the supply, yet most are convinced that strong, cold, and damp winds may be injurious to weakly and diseased persons. They exert a generally depressing effect and favour any tendency to bronchitis, and it is thus that Dr. W. Gordon explains the harmful influence of the west and south-west winds in Devonshire in regard to pulmonary tuberculosis. Moreover, cold strong winds induce persons to keep doors and windows shut and to remain in stuffy rooms. One of the great advantages of a sheltered sunny winter climate is that more time is likely to be spent in the open air.

Professor Hann selects striking and often familiar phenomena to illustrate elementary principles. Thus, he very clearly explains the causes of the usual morning and evening winds in mountain valleys and the apparent exceptions to the rule, such as in the Upper Engadine. The morning wind blows down instead of up the valley of the Upper Inn during the warmer months, whilst in the side-valleys the morning winds blow upwards according to the rule. Billwiller and others have shown that this apparent exception is due to the fact that the Upper Engadine is not inclosed at its upper end and that on the further side of the Maloja Pass, which is but little higher than the valley floor itself, is the head of the deep and well-warmed valley of the Maira (Upper Bergell) the air of which rises above the level of the Maloja Pass and descends the Upper Engadine valley. Professor Hann likewise explains the origin of the "Foehn" and other local winds for which various theories have at different times been propounded. The results of the studies of Erk, Billwiller, and Pernter show "that in the rear of the larger barometric depressions which usually pass by on the western or north-western side of the Alps there are developed local depressions with their own inflowing spiral wind systems along the northern border of the Alps and in the Alpine valleys themselves and that these are the immediate cause of the Foehn." This explains the local violence of the Foehn winds and their frequent occurrence in the eastern Alps, especially at Innsbruck, in apparent disregard of the general distribution of barometric pressure. Winds analogous to the "Foehn" of Switzerland occur in other countries and can be similarly explained.

In regard to the theory of Dubois concerning the great changes of climate to which the world has, according to geological evidence, been subjected the following conclusion is arrived at: "*One thing, however, is certain and this is* that in explaining the climates of the geological past the sun cannot be considered to be an absolutely constant source of heat. Hence, such considerations as those which have been urged by Dubois are perfectly legitimate."

In the portion of the book dealing with mountain climate the physiological effects of diminished atmospheric pressure and the question of "mountain sickness" are considered The effects of high altitudes on the blood are, of course, alluded to, but many observations on the subject remain unnoticed. Thus, though mention is made of the writings of P. Bert, Egli-Sinclair, A. L. Rotch, F. Viault, A. Muntz, and P. Regnard, those of F. Miescher, F. Egger, A. Gottstein, E. Meissen, G. Schroeder, von Pacht, S. E. Solly, W. A. Campbell, and H. W. Hoagland and other recent observers have been omitted. Yet it must be allowed that the whole subject of blood changes at high altitudes has even yet not been settled, and possibly a prolonged discussion of the question might be considered out of place in a handbook of general climatology.

We consider that the present volume should be in the hands of every student of general climatology since it is a careful, ably written, and trustworthy text-book on the subject.

LIBRARY TABLE.

The Castration of Cryptorchid Horses and the Ovariotomy of Troublesome Mares. By F. T. G. HOBDAY, F R C V S. London and Edinburgh: W. and A. K. Johnston. 1903 Pp. 105. Price 5*s*.—The treatment of cryptorchidism in the horse is not uncommonly a matter of necessity, as such an animal may at any time display a vicious and treacherous disposition. Mr. Hobday has collected in this little book an interesting series of consecutive cases of castration of cryptorchid horses and of ovariotomy of troublesome mares With regard to the fertility of such horses it is interesting to note that spermatozoa were demonstrated by Professor M'Fadyean not only in five of the cases where the testis was in the inguinal canal but also in two instances where it was in the abdominal cavity. Two of the colts were out of the same mare but by different sires, while three were by the same sire out of different mares. In regard to the troublesome mares it is not uncommon to get a condition of almost continuous œstrum which renders them too objectionable or treacherous to be used and the only thing to be done is either to sell the animal or to have it operated upon. The result of ovariotomy, as a rule, is good, except in the case of aged mares or in those in which the habit of kicking has been of long standing. The operation is performed through the vagina and the fact that in two cases the animals were ridden within seven and ten days respectively shows how little shock is produced The book is an interesting proof of the success with which major surgical operations can be performed upon equine patients under anæsthetics and with modern antiseptic precautions.

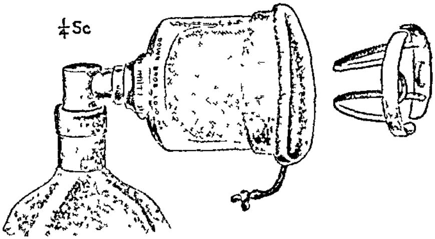
JOURNALS AND MAGAZINES.

The Medical Magazine.—The issue for May contains some remarks upon the Midwives Act by Dr. W. J. Sinclair which are prefaced with the hope that future amendments to the Act will be in the direction of greater stringency and efficiency. He considers that more definite limitations should be placed upon the action of the midwife of the future and that her scope should be clearly outlined in a manner which is not likely to obtain under the Act as it stands. Dr. Frederick Taylor contributes an article which supports his well known views upon the treatment of chlorosis, and the editorial notes touch briefly upon general events of current interest in the medical world.

New Inventions.

AN INHALER FOR THE ADMINISTRATION OF SOMNOFORM.

THE accompanying illustration represents an apparatus which I have now used for some months for the administration of somnoform, consisting of a celluloid face-piece connected by means of a right-angled metal tube to a rubber bag. The face-piece is lined with lint which is maintained in position by a special spring, horseshoe in shape, preventing collapse of the lining during any deep inhalation by the patient. The lint can be thus readily changed and a clean piece substituted. In using this apparatus the dose of somnoform required for a single administration, producing an anæsthesia averaging from 90 to 120 seconds, is about two and a half cubic *centimetres—i.e., half the dose* of the drug marked on the bottles in which it is supplied for use with the handkerchief cone adopted by Dr. Rolland. The apparatus was made for me by, and can be obtained from, Messrs. Down Bros , Limited, 21, St. Thomas's-street, London, S E.



R. H. JOCELYN SWAN, M.S Lond., F.R.C S.
St. Thomas's street, London Bridge, S.E.

ENEMA SYRINGE.

MR. R. J. REUTER of 6, Well-street, Jewin-street, London, E.C., has brought to our notice a new enema syringe presenting certain novel features in its parts which are of distinct hygienic advantage. To begin with, there are no metal parts at all in the appliance, and therefore no metallic contamination can take place or deterioration or break-down of the valves due to rusting or corrosion. The valves, which permit of the passage of the fluid by the action of the elastic chamber in one direction, are also made of vulcanite. The cannula terminates in a circular slit so that the fluid is delivered in the shape of a spherical film. There is thus a considerable but gentle distribution. The vaginal injection tube may be replaced by a vulcanite rectum pipe. The valves can easily be removed for cleansing purposes and all parts can readily be washed with an antiseptic solution. Altogether the special construction of this enema syringe is calculated to insure the use of a perfectly clean instrument for the particular purpose for which it is designed.

THE LANCET.

LONDON: SATURDAY, JUNE 13, 1903.

The Metropolitan Hospital Sunday Fund.

NEXT Sunday, June 14th, is Hospital Sunday. All our readers know it, and the strenuous exertions of the supporters of the Fund and of ourselves to bring the occasion prominently before the public have led to the fact being common knowledge also. What remains for us to do on the eve of the great annual collection is very little. We can only add to our advocacy of the movement a few last words in reinforcement of the extraordinary efforts being made this year to ensure a record result. The actual and final advancement of the claims of the Hospital Sunday Fund upon the public does not rest with us. The maintenance, efficacy, and well-being of the institutions which exist for the healing of the sick and maimed poor of all creeds and nationalities in this great metropolis will be pleaded for to-morrow by the ministers of all sections of religious opinion in churches and places of worship dedicated to various creeds. Our part has been to supply the pleaders with facts in aid of their arguments and with concrete reasons upon which to base their demands for liberal alms. Our annual supplement strives to do these services, and we are proud to know that its publication in our columns and its dissemination in places of worship a week prior to the collection are regarded by the managers of the Fund, as well as by the occupants of the most important metropolitan pulpits, as a powerful adjuvant to the cause.

Thirty years ago the idea of instituting an annual collection in the metropolitan places of worship for the metropolitan hospitals and dispensaries first took shape, and the leading part that was played in the movement by the proprietors of this journal, and especially by our then editor, the late Dr. JAMES WAKLEY, by Sir SYDNEY WATERLOW, and by the late Canon MILLER of Birmingham may properly be recalled. At that time it was difficult to arouse public interest in the needs of the hospitals. The value of the work done for the sick and injured poor of London by many noble healing institutions was not recognised by the public to the same extent that it is now, and the powerful patronage under which the Metropolitan Hospital Sunday Fund and King Edward's Hospital Fund for London flourish to-day had not yet been extended to them. It is known now to all England that the KING OF ENGLAND makes the condition of, and the treatment of, helpless sufferers in his imperial capital the subject of his peculiar and anxious care. When he instituted the Fund that bears his name we stated definitely that it was in no sense to be regarded as a rival or a supplanter of the older charity, a point which has since been emphasised on several occasions. This year HIS MAJESTY has done more. With a magnificent spirit of coöperation in the work of the Metropolitan Hospital Sunday Fund he attended St. Paul's Cathedral last week, accompanied by the QUEEN and many members of the Royal Family, and there took part in an enthusiastic service at which a special appeal was made on behalf of the London hospitals. A magnificent sermon, clear, brief, eloquent, and pointed, was preached by the Bishop of STEPNEY, and no less a sum than £4300 was received at the collection made upon the close of the service on behalf of the Metropolitan Hospital Sunday Fund. The impetus and publicity that HIS MAJESTY'S action has given to the work and claims of this Fund will certainly have enormous influence upon the donations of to-morrow. Once again and in the most prominent and practical manner our KING and our QUEEN have displayed their known feeling towards the London hospitals, and so far-reaching is the influence of their opinion, because so genuine is the personal affection which they inspire, that we may hope that the total to be received this year by the Metropolitan Hospital Sunday Fund will be the one which has always been regarded as the proper figure for an annual collection in such a city and for such an object—viz., £100,000.

Following hard upon the invaluable assistance of their Majesties there was held this week at the Mansion House an important meeting with the object of furthering public interest in the hospitals and medical charities of the metropolis. At this meeting His Grace the ARCHBISHOP OF CANTERBURY brought forward a motion in these terms: "That in view of the great interest taken by HIS MAJESTY in promoting the welfare of the metropolitan hospitals this meeting pledges itself to use every effort to make the Hospital Sunday collection a 'record' one this year." The Archbishop said that the corporate life of which Londoners should be proud would be deliberately set on one side if the claims of the London hospitals for real, substantial, and permanent support were ignored—indeed, that those doing so would place themselves outside the pale of ordinary civilisation. That is the view—the strong, clear view—that we should have expected his Grace to take, and it is our own view. No citizen is worthy of the name of citizen who does not acknowledge cheerfully that it is his duty to help to the best of his ability the sick and suffering poor of the community. Sir R. DOUGLAS POWELL in seconding and Sir FREDERICK TREVES in supporting the motion, which was unanimously adopted, took practically the same line, though using different illustrations to point their words They showed that not only had the work done by the hospitals of London enormously increased in bulk but that by its higher scientific standards it was able to do incalculably more permanent good than was possible under older conditions. This is a side which is too often neglected by those who are speaking in behalf of hospital charity, but it was made very definitely by both the speakers who affirmed out of an enormous experience of hospitals that the public, in return for their contributions, received benefits which repaid the debt over and over again. Self-interest, in short, should also inspire the vast generosity that we hope to record as the result of the collections to-morrow in the various metropolitan places of worship. Have we not in these few words justified a belief that the record total will be reached?—indeed, we do not see why the ideal figure should be fixed at any sum. Love of GOD and love of man, loyalty to the Crown and loyalty to the ordinary standards of civilisation, generosity and prudence alike, should prevail with us to give to the limit of our power.

The Royal Dental Hospital and its Honorary Anæsthetists.

IT is satisfactory to learn that the affairs of the Royal *Dental Hospital as regards its staff of anæsthetists* are being settled in a manner that complies to some extent with the views that we expressed in these columns some four months ago, at a time when those responsible for the management of the hospital appeared to be on the eve of a most unfortunate departure. The Royal Dental Hospital would certainly have suffered not only in prestige but in its capacity for fulfilling the purposes of its existence had the committee of management persisted in its original proposal, which was virtually the summary dismissal of its honorary staff of anæsthetists. The proposal was made hastily and without proper regard either for the needs of the hospital or for the ordinary forms of courtesy, and if it had been carried out the charity would have suffered the obloquy of being placed in a retrograde position. Both the medical profession and the public at large would have seen in the failure to recognise the importance of maintaining a strong staff of anæsthetists a remarkable indifference to the trend of modern scientific opinion. The hospital authorities appear anxious now to escape this reproach. They are also desirous of avoiding the appearance of belittling the services of their staff of anæsthetists, an appearance that, considering the traditions of the hospital and how intimately the progress of our knowledge of anæsthetics in this country is bound up with the practice within its walls, was a peculiarly unfortunate one. If we are not able to say that the scheme of reform which it is proposed to adopt is a perfect one, we are glad to recognise a spirit of conciliation in the new plan for the regulation of the administration of anæsthetics in this important institution.

The committee of management of the Royal Dental Hospital has now adopted the report presented to it by the subcommittee appointed early in the year to consider and to report upon the arrangements for the administration of anæsthetics at the hospital. This report was carefully discussed at a meeting held on May 21st and may be considered to embody the views of the authorities. It commences by alluding to the constantly increasing number of patients requiring anæsthetics and to the difficulty in satisfactorily accomplishing the large number of extractions which have to be made. As the obvious way of dealing with the mass of work the appointment is recommended of two paid officers whose duty it shall be to see "that no case requiring an anæsthetic is dismissed without treatment." This is not a very clear definition of the functions of the paid anæsthetists. They will be engaged, we take it, in the administration of anæsthetics when these are required, not in arranging for the reception, or the dismissal, of patients, for which they should be in no way responsible. Where there is a doubt as to the propriety of administering anæsthetics the honorary anæsthetist rather than the paid officer would, we presume, be the authority relied upon for a decision. The next section of the report deals with the appointment of the honorary anæsthetists and of these it is recommended that six should be appointed "to have the general supervision of the department and to be responsible for its efficient management to the committee of management." This seems clear enough, but when the duties of the honorary anæsthetists are set out in detail it is not easy to understand how they will perform them. They are to be six in number and "each honorary anæsthetist is to attend *at the hospital one day in each week* (the respective days to be arranged amongst themselves), either morning or afternoon, for the purposes of administering anæsthetics, of giving advice and instruction to the house anæsthetists, and of generally supervising the department." If this paragraph means that each anæsthetist shall once a week spend a morning or else an afternoon at the hospital, then, as there are to be but six anæsthetists, obviously five mornings or afternoons remain unprovided for if, as we believe, the hospital is not open to patients on Saturday afternoons or during Sundays at any hour. It may be intended that each honorary anæsthetist shall spend one day a week at the hospital, that day being made up of two mornings, or of two afternoons, or of one morning and one afternoon, in which case one member of the honorary staff would get a weekly half-holiday. The paragraph that follows is equally puzzling, for it states that the anæsthetists shall "when requested, either by a dental surgeon, or in his absence by the dental superintendent, attend, on their own day as speedily as possible, to administer anæsthetics in special cases." But surely the honorary anæsthetists should not require special requests to attend on "their own day" when they would presumably be in the building.

We have said enough, and in no spirit of carping, to show that the wording of the adopted report is open to objection; to the matter of it we take little exception. The present honorary staff of anæsthetists will resign so as to allow of the remodelling of the department, but they will be eligible, *of course, for* re-election, though only six of them can retain their posts. The holding of the posts will be subject to annual re-election. We see no particular gain in the reduction of the number of honorary anæsthetists and it is highly important that the process of selection decided upon should not be allowed to look as though it had been meant to secure the absence of any particular member of the present staff. The immediate result of the reduction in the staff will be that on a certain number of mornings or afternoons the administration of anæsthetics may be entirely in the hands of the paid or house anæsthetists, and we do not know what grounds the committee of management may have for supposing that for these posts men of much experience will be available. This, however, remains to be seen and we hope heartily that an honest attempt to meet a very serious difficulty will result in success. But we would urge upon the committee of management the absolute necessity of revising the phraseology of the report before transforming it into new regulations. It will be courting a recurrence of trouble if the character and scope of the work expected from the honorary staff of anæsthetists and from the house anæsthetists are left in any sort of doubt. The committee of management should define exactly what are the duties which it requires, and having done so there will be nothing but praise for it if it takes the most drastic steps to insure those duties being performed.

The General Medical Council and the Royal Colleges of Physicians of London and Surgeons of England.

ON several occasions during the last few years it has been our duty to refer to the lamentable dispute which has arisen between the General Medical Council on the one part and the Royal College of Physicians of London and the Royal College of Surgeons of England on the other with regard to the conduct of the earlier portion of medical education—a dispute which has now reached a stage at which accommodation seems more difficult than ever and from which any advance on either side seems more likely to injure than to benefit the cause which both of the disputants, no doubt with entire sincerity, declare that they have at heart. It will be remembered that the Council several years ago, after prolonged deliberation and with the full assent of the representatives of the London Colleges, determined to increase the length of the medical curriculum from four years to five and to allow the first of these years to be devoted, mainly or entirely, to physics and biology. The change was very generally approved by the profession and after a necessary period of transition it was commonly believed to have been brought into operation and to be working satisfactorily to all concerned. From this belief the Council was somewhat rudely awakened by a communication from the Royal College of Surgeons in Ireland in which it was set forth that the new regulations had, in fact, been evaded by the London Colleges in the sense that they accepted as the first year of the new curriculum what was, in fact, the last year of ordinary school education conducted at almost any establishment in which instruction in physics and biology was said to form part of the course. The Irish College pointed out that its own strict observance of the recommendation of the Council placed it at a great disadvantage as compared with competing qualifying bodies which disregarded it and intimated that unless the Council could induce the London Colleges to conform the Irish College might be compelled to cease from doing so. It is needless to follow the details of a controversy every step of which has been recorded and commented upon in our columns. We need only say that the Council determined to refuse registration to so-called "medical" students who were still pupils at common schools unrecognised by the Council and that the London Colleges, in reply, ceased to require registration as a condition of examination for their diplomas. The Council appointed a strong committee, of which the representatives of the two London Colleges were members, to inquire into and to report upon the circumstances of the case, and this committee, the two representatives in question alone dissenting, recommended the Council to report to the Privy Council that the course of study required by the Colleges was, in the terms of the Medical Acts, "insufficient" to secure the possession of the necessary skill and knowledge for the practice of the profession. In the meanwhile the advice of counsel had been sought upon the legal aspects of the question, and finally it was carried as an amendment to the report of the committee that the examinations of the Conjoint Board in chemistry, physics, and biology should be visited and inspected by Dr. WINDLE and Professor CAMPBELL BROWN on behalf of the Council and that the whole matter should be suffered to rest until the report of this inspection had been received.

The report in question was presented to the Council during the session just concluded and its consideration was adjourned to a special session to be commenced on July 15th. We have already published the essential parts of the report, and it is sufficient now to say that it entirely supports the contention of those who maintain that the knowledge gained during the last year of school teaching is of no appreciable value as a preparation for medical study. "Nothing struck us more forcibly," say the visitor and inspector, "than the fact that scarcely a single candidate presented himself in biology who could be said to have exhibited the possession of any real grasp of the elementary principles of the subject." The ignorance of many of the candidates is said to have been "unfathomable" and the general character of the examination such that "a candidate might very well pass and does pass with only an empirical knowledge of a few facts crammed up from a book or a teacher and with no understanding of elementary principles." It is abundantly manifest that the first year of what is nominally medical study, as it has been conducted under the regulations of the London Colleges, has been of no practical value to the students, either as regards mental training or as regards the acquirement of knowledge calculated to afford a satisfactory foundation for future attainments. On the presentation of the report SIR VICTOR HORSLEY gave notice of his intention to move that the insufficiency of the courses of study and examination should be represented to the Privy Council in accordance with the terms of the Medical Acts; and this notice appeared in the *Times* report of the proceedings of the Council on the following day. The PRESIDENT called attention to it as having appeared by error, inasmuch as the notice had been withdrawn from the consideration of the Council for the time being. At any rate, it may be regarded as a declaration of war against the Colleges and if it should hereafter be adopted by the Council it can scarcely fail to be productive of very mischievous consequences.

The report of the visitor and inspector has, of course, been communicated to the two Colleges concerned and the College of Physicians has not yet furnished the Council with its commentary. That of the College of Surgeons has been received and published; and it would be difficult, we think, to conceive a document displaying a more complete incapacity to discern the magnitude and the character of the issues which are involved. An apparent and wholly unimportant verbal inconsistency between two sentences of the report is seized on; and "we"—i.e., the College—"are of opinion that the visitor and inspector are in error in supposing that the examination is not sufficient for the purpose for which it is intended. This purpose is the testing of such knowledge of chemistry, physics, and biology as a student may acquire in proper laboratories and under sound teachers in the first year of his medical studies." Such an attitude is manifestly hopeless and would clearly compel the Council to report to the Privy Council in the manner proposed by Sir VICTOR HORSLEY. Of the result there could, we think, be no doubt. The Colleges would support one another with the whole of their influence and the question of the sufficiency or insufficiency of the current system of medical education would be argued before an incompetent legal tribunal, certain to be unduly influenced by the supposed authority of venerable corporations. The effect produced upon the public would be to increase their distrust of medical science and to give a new lease to quackery and to "anti-ism." The licensing bodies, entirely released from their present doubtful allegiance to the Council, would be free to render themselves more and more acceptable to students and the standard of qualification would decline steadily under the influence of open competition. We hope it is not too late to appeal to the Royal College of Physicians of London to stay the downward course of events by an act of wise and conciliatory statesmanship, such as the history and repute of the College give us a right to expect from those who control its destinies. The exceeding badness of the education given at the "approved" schools has now been rendered manifest; and the College might gracefully take the lead in revising both the list and the requirements. Sir VICTOR HORSLEY'S motion will meet with no influential support unless the Colleges themselves render its acceptance inevitable, for doubtless the Council has no desire to provoke a contest which, however it terminated, could only be disastrous to all concerned. It is manifest that the Council cannot recede from its present position without absolute and irrecoverable loss of authority; and it is equally manifest that such a loss would reduce the granting of medical qualifications to a mere Dutch auction between competing bodies. From such an issue we appeal to the Royal College of Physicians of London to preserve both the profession and the country, and we feel confident that we shall not appeal in vain.

Annotations.

"Ne quid nimis."

THE BALLACHULISH CASE.

THE case of Dr. Lachlan Grant, whose treatment at the hands of the directors of the Ballachulish Slate Quarries Company, Limited, has been made the subject of detailed comment in these columns on several occasions, has taken a step forward. A judgment of Lord Kyllachy, it will be remembered, recently held that in dismissing Dr. Grant from his position as medical officer to the Ballachulish Slate Quarries the directors of the company had acted within their rights, although the men and not the directors paid Dr. Grant's salary and although they thoroughly trusted him and desired his continuance in his post.[1] Against this judgment Dr. Grant has appealed to the Inner Division of the Court of Session, before which the case came on May 29th. Four judges were on the bench and it is understood that after a prolonged discussion the court was equally divided upon the point at issue—viz., whether the agreement under which Dr. Grant held his office could be terminated at the sole will of the directors. The court made *avizandum*, so that its ultimate decision may be delayed some time. In the meantime Colonel Malcolm of Poltalloch, chairman of the Ballachulish Slate Quarries Company, has been to Ballachulish, has met the quarriers, and has been subjected to a severe heckling. Colonel Malcolm read a written speech to the men in which he protested that the directors had acted throughout in the men's interests and that the manager was the men's best friend. The speech was received with ridicule by his audience It was openly stated that the manager had caballed against Dr. Grant whose services the men paid for and intended to retain. Colonel Malcolm then made the amazing statement, according to the *Highland News* of May 30th, that Dr. Grant was dismissed "in order to make a new agreement with him." Being expressly asked if he meant "in order to make a new agreement with Dr. Grant" or "in order to make a new agreement with a different medical man," the Laird of Poltalloch deliberately repeated that it was intended "to reappoint Dr. Grant, but on a different footing," and immediately afterwards admitted that weeks before Dr. Grant was dismissed negotiations had been entered into with another medical man. Colonel Malcolm must have more than military courage to make such admissions. Colonel Malcolm also said that Dr. Dunlop Anderson of Ardsheal, a neighbouring landowner, who has been mentioned in our columns as throughout a firm supporter of Dr. Grant, had privately written to him recanting his position. This, we are informed by Dr. Anderson, is absolutely untrue, and proceedings have been taken to contradict Colonel Malcolm publicly. In this distressing case one thing is most clear and most gratifying—it is the absolute loyalty of the quarriers to Dr. Grant. They will not allow their employers to jockey them out of their clear right to select the medical man whom they pay; nor do they intend to let Dr. Grant have put upon him the gross injustice and slur of a summary dismissal when he has always discharged his duties efficiently. Surely the directors of the Ballachulish Slate Quarries must recognise that they are dealing with determined and reasonable men who, whatever the law may say, have justice on their side. Peace can only be restored by the reconfirmation of Dr. Grant in his post as medical officer to the quarries. This, Colonel Malcolm has said publicly, was the original intention of the directors and as the statement requires a little confirmation why should not his colleagues support Colonel Malcolm's words at once in a practical way? To do so will be to own themselves defeated? No By such thoughtful action they will show that they have reconsidered a position which they took up in haste and upon information of a very doubtful kind. They will display the bravery that is not afraid to own an error of judgment and they will secure the respect of their men as well as their services—whereas now they enjoy neither.

TONSILLITIS.

TONSILLITIS is usually a more or less common disorder in London during the later spring months. This year sore-throats appear to have been even more prevalent than usual; indeed, many of the attacks have been very severe and accompanied by erythematous rashes and constitutional symptoms which have made the diagnosis between them and scarlet fever a matter of some difficulty. Inasmuch as the specific characteristics of scarlet fever are not infrequently masked by the concomitant symptoms due to poisoning with streptococci, this difficulty of diagnosis is hardly to be wondered at. It is abundantly evident that the condition of the wood pavements, the recent drought, and the high winds have acted in coöperation to load the lower strata of the metropolitan atmosphere with organic and infective matter of a highly dangerous character. Although it is obviously possible by a more careful watering of the streets and by improved methods of scavenging to minimise the dangers arising from dust, it is improbable that, as long as we depend on the energy of the horse for the purpose of vehicular traction in the streets, we shall be free from epidemics of tonsillitis during times of drought and high winds. After all there are advantages, direct and indirect, not only in motor-cars, but also in petrol, as a source of energy and as an antiseptic for the streets.

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[1] THE LANCET, Jan. 24th, 1903, p. 249.

FICTITIOUS WINES: SOME INTERESTING RECIPES.

WE believe on the whole that the great bulk of the cheap wines sold to the British public by respectable merchants are genuine, in so far that they are real fermented grape-juice. This is, perhaps, more particularly so in regard to Bordeaux wines, though, doubtless, there are genuine light red wines imported as French wines which, however, have not been produced in France Resent this comparatively trifling form of fraud as we may, it is obviously not so wicked as having a wine thrust upon us which is not fermented juice at all. A short time ago a person somewhere on the banks of the Rhine was caught compounding a fluid which he bottled and described as "Niersteiner," which of course implied that it was the wholesome wine produced in a certain district famous for its light Rhine wine. As a matter of fact, the fermented juice of the grape proved to be the smallest item in the formula, the rest being made up of alcohol, water, and certain flavouring materials. In this country also there is no doubt that to a certain extent—but we think a limited extent—fictitious wine is made. Thus, in some evidence given before the Departmental Committee on Food Preservatives four years ago it was stated that somewhere on the banks of the Thames a preparation was made which was sold as "St. Julien." As there was no duty paid on this stuff it is not surprising that its price was not more than 6½d. a bottle and we daresay that that figure left a fairly respectable margin of profit to the manufacturer. Possibly this "wine" brought a much higher price when ultimately sold by the retailer to an individual customer. It would be interesting to discover the true composition of the claret commonly labeled "St. Julien" which is to be found at most public-houses or country inns, however remote they may be. As a rule there is nothing but the description "St. Julien" or perhaps "Medoc" on the label and there is certainly no evidence of *bona fides* on the cork. In this connexion we have recently come across some interesting recipes for making wines which are calculated to throw some light on the "wine" which is now and again met with. To make Bordeaux wine, for example, "it is best to use a light Hungarian red wine. Mix with 50 gallons one pint of kino, two to three ounces of sulphate of iron, dissolved in one quart of boiling water, and one wine-glassful of extract of orris root and a like quantity of raspberry extract." We may parenthetically remark that we have occasionally tasted cheap clarets having a flavour resembling that of orris root. For making Burgundy it is enjoined to "mix in a barrel 100 parts of white wine, ten of the juice of black cherries, six of crushed large raisins, six of pulverised cinnamon, half of pulverised crude tartar, and 50 of must concentrated by evaporation." The following formulæ are also suggested. "*Champagne liqueur.* Boil eight and three-quarter pounds of the finest loaf sugar with one gallon of water, add gradually while the water is boiling half gallon of alcohol of 90 per cent. and then filter the mixture." "The above liqueur is added to all the following compounds." (We reproduce them literally to show the disgraceful use made of the names of certain well-known champagne firms.) "*Chandon et Moet (Green Seal).* Mix the above liqueur with seven and a half gallons of white wine and one quart of Cognac." "*Louis Röderer (Green and Bronze Seal).* Mix the champagne liqueur with seven and a half gallons of white wine, one bottle of Cognac, and four drops of sulphuric ether dissolved in Cognac." "*Heidesick et Cie (Sealed with Tin-foil).* Mix the champagne liqueur with seven and a half gallons of white wine and three quarters of a pint of Cognac." The next one is very interesting. "*Lemberg Geldermann et Deittz (Sealed with Tin-foil).* Mix double the quantity of champagne liqueur with seven and a half gallons of white wine and three-quarters of a pint of Cognac in which two roots of celery carefully cleansed have been previously digested for four hours." Similar formulæ for other brands are given and directions are appended for making Madeira, Malaga, and port. In one of these (Malaga) "*essence de Goudron*" is employed. The champagne preparations "are corked with champagne corks and laid on their sides with their mouths sloping downwards. They are recorked the next day with the corking machine. The corks before using them must be laid in hot water, and before placing them in the machine moistened with sugar syrup, and as soon as driven into the bottles tied with cord and finally wired." Anything more brazen than this we can hardly imagine.

FRACTURE OF THE BASE OF THE SKULL WITH SPECIAL REFERENCE TO PROGNOSIS AND MENTAL SYMPTOMS.

AT the presidential address recently delivered before the New York Neurological Society and published in the *Medical News* of May 16th Dr. Pearce Bailey gave an account of his investigations upon the subject of fracture of the base of the skull with special reference to prognosis, mental symptoms, and medico-legal bearings. The symptoms of fracture of the base of the skull had been described by Hippocrates. Though the symptoms were the result of an extreme degree of violence they presented, adds Dr. Bailey, a certain consistency of type. The mortality was high and varied from 55 to 60 per cent. Thus, of 58 cases of fracture of the base of the skull collected by Heer in 1892–99 death occurred in 29 cases, a death-rate of 50 per cent. Van Nes records 82 cases with 39 deaths, while Phelps, in his work on Traumatic Injuries of the Brain (1897), collected 286 cases of fracture with 176 deaths, a mortality-rate of 61 per cent. Of 69 cases collected by Weir, Bull, and the writer himself 40 died as the result of fracture of the base of the skull, a proportion of 58 per cent. The symptoms observed, both focal and general, were fairly uniform. The focal symptoms included amblyopia and amaurosis, oculo-motor paralysis, and paralysis of the facial nerve. Loss of consciousness and coma were the chief general symptoms. "The majority of the patients are in a state of coma when first examined and a goodly proportion die within 24 hours of the injury." Pupillary inequality with dilatation on the side most injured is the commonest symptom. There is a want of parallelism in the optic axes and diplopia may be detected in the milder cases. Facial paralysis comes next in order of frequency. The lower facial branches are more liable to be affected than the upper, and the facial paralysis tends to persist when the oculo-pupillary disturbances have passed away. The trigeminal nerve is rarely if ever the seat of focal paralysis. Injuries of the middle ear are frequent, together with involvement of the auditory nerve and deafness, but the exact mode of involvement of the auditory nerve is difficult to determine. A frequent symptom is weakness of the legs, coupled often with slight rigidity of the affected parts. Occasionally there may be hemiplegia. The knee-jerks are frequently lost at first but later they return and may even be exaggerated. As regards mental symptoms, Dr. Bailey points out that a large proportion of patients who die never emerge from the coma immediately succeeding the injury. The most characteristic mental state is one of semi-coma or stupor with delirium The patient lies still, resents being disturbed, and if disturbed becomes restive and irritable. There is frequently developed a muttering hallucinatory delirium which may, especially in alcoholic subjects, require watching and mechanical restraint. Sudden impulses to get out of bed and to rush out of the room are very common Memory of events for an hour or for a day or two prior to the accident may be entirely lost. Dr. Bailey cites two cases in one of which the memory of events during the half-hour preceding a railway accident, and in the other of the incidents of four days preceding the fall from a horse, were abolished. The duration of serious mental symptoms is variable. Some patients emerge from the initial coma lucid in mind and free from any trace of mental affection. Others continue in a state of semi-coma and delirium for days and weeks and in a few cases cerebral and mental disturbances persist long after physical strength is regained. As regards prognosis the combined statistical records of Heer, van Nes, Phelps, and the writer give 494 cases with a mortality of 57 per cent. Death in the majority of instances is directly due to the injury, thus, 62 per cent. of the deaths occurred within 24 hours and 95 per cent. within five days. Those dying after longer periods developed either pneumonia or meningitis. As regards the ultimate prognosis with reference to mental life 15 out of 29 patients were traced by Dr. Bailey and their conditions were carefully studied. The following cases are extracted as typical instances. In Case 1 the patient was a boy aged seven years at the time of injury (April, 1901). He recovered in a few days At present (1903) he goes to school. "He is slightly more irritable and boisterous than formerly and often becomes uncontrollable." He has no fits. Case 4 was that of a boy aged five years at the time of the accident (September, 1901). He recovered but has ever since then been nervous, irritable, and subject to headaches He has no fainting or convulsive fits. Case 6 was a girl aged 13 years at the time of the injury (December, 1901) There are no untoward symptoms in this case. Case 8 was that of a man, aged 26 years, who had fractured the base of the skull in August, 1901. For 12 days he was in a state of semi-coma. He made an excellent recovery At present he has slight ptosis and excess of one knee-jerk. There is amnesia for the events of four days preceding the injury. He is free from headaches or fits and his character is unchanged. Two other cases cited by Dr. Bailey showed after recovery a greatly increased susceptibility to alcohol Insanity is rare, concludes Dr. Bailey, after fracture of the base of the skull as compared with fracture of the vault of the skull. The mental conditions occurring in the latter class of cases are proposed to be dealt with in a subsequent paper.

BATTERSEA BLUSTERINGS.

THE borough council of Battersea is a body in no need of advertisement but we may nevertheless call attention to its methods of pursuing the campaign against vaccination and incidentally express our sympathy with the unfortunate general practitioners whose lot happens to be cast in the district ruled by that corporation. Those, and they are probably many, who remember the council's attitude towards His Majesty the King at the time of the Coronation will be prepared to learn that it displays scant courtesy in its dealings with such comparatively humble persons as members of the medical profession. In connexion with an outbreak of small-pox which, we are not surprised to find, has occurred in Battersea, the local health committee reported recently that "cases have been traced to previous cases of the disease which have been treated by the medical practitioners in attendance as cases of disease other than small-pox." From the statement of the medical officer of health it appears that in one case a patient was kept under observation, though not isolated, for four days before it was decided that notification was necessary, while in another, which was described as "a very difficult case to diagnose," the true condition was not recognised for an even longer time. On the strength of these facts, at the meeting of the council on May 27th, several members insisted that the names of the medical men concerned should be published. Some of the reasons adduced in support of this proposition are worth recording. One gentleman declared that "he had no compunction for the doctors; they had none for the anti-vaccinators." Another "hoped that they would take the reasonable step of publicity, so that they might have a reasonable hope that these offences would not be repeated." A third instanced the depravity of his own medical adviser, against whom he launched the crushing indictment: "He's never been paid yet." Undue harshness was deprecated by the chairman of the health committee who regretfully admitted that "whatever their calling they were all in error sometimes; he was himself sometimes as a bricklayer," and eventually it was decided by 27 votes to 16 not to publish the names We are, however, left in some doubt as to the part which the suggestion that publication would lay the council open to legal proceedings played in bringing about this happy ending. Possibly, if Battersea councillors had any practical experience of the difficulty of diagnosing small-pox they would be a little more charitable; but however that may be we protest strongly against the disgraceful attempt to pillory local medical men to which, under the pernicious influence of the anti-vaccination virus, so many members of the council committed themselves.

THE NATIONAL SOCIETY FOR THE PREVENTION OF CRUELTY TO CHILDREN.

THE annual report of this society has just been published. We learn from it that the progress of the society during the past year has been on the whole very satisfactory. The number of cases inquired into during this period in England, Wales, and Ireland (a separate report is issued for Scotland) has reached the considerable total of 34,945 This fact alone ought to constitute a sufficient vindication of the society's existence if such were necessary. At the same time it is encouraging to find in the speech of the chairman, Lord Ancaster, at the annual meeting a statement that the number of prosecutions instituted by the society has diminished. On the other hand, we note that the convictions obtained have been more numerous than previously. This apparent paradox is explained by the fact that the method always preferred by the society's agents where it is available—that of warning delinquents—has proved in many cases an effectual preventive against the practice of cruelty. Consequently the term prosecution has become narrowed in its meaning and it now includes a larger proportion of those inveterate forms of tyranny which can only result in a punitive sentence It is gratifying to learn on the same authority that the attitude of the judicial bench is becoming increasingly friendly to the procedure of the society Lord Alverstone has spoken in high praise of its work, which, in the language of another eminent judge, has been carried on with great prudence and forbearance and without needless and officious interference We can cordially indorse these expressions of approval. Financially, the society, though not affluent, is in a solvent condition. After meeting last year's expenses it could show a credit balance of £266. The assurance of its president that all funds intrusted to the managing committee are employed exclusively to the best advantage of suffering children requires no confirmation. Those who are conversant with the history and the administration of the society can have no doubt upon this point.

PLAGUE IN BERLIN.

A YOUNG Austrian medical man named Milan Sachs who was studying bacteriology in Berlin has just died as the result of an unusual accident. While injecting a rat with a culture of the bacillus of plague he wounded his hand and contracted plague by inoculation. A hospital attendant who nursed Dr. Sachs during his illness has since been unwell but is now believed to show no symptoms of plague. All the persons who came into contact with Dr. Sachs in any way after his illness declared itself are rigidly isolated in the Charité Hospital. It will be remembered that more than four years ago a similar accident occurred in Vienna and unfortunately resulted in several deaths. An account of this occurrence will be found in several numbers of THE LANCET, commencing with the issue of Oct. 22nd, 1898, p. 1080.

THE RELATION OF CHOLELITHIASIS TO PANCREATITIS.

THE *New York Medical Journal* of May 16th contains an important paper by Dr. Joseph Wiener, jun., on the relation of cholelithiasis to pancreatitis. Anatomical facts lead to the conclusion that a close relation must exist between affections of the common bile-duct and of the pancreas. A stone which obstructs the common bile-duct near the papilla of Vater must obstruct the duct of Wirsung. If the pancreatic secretion cannot enter the intestine microbes may make their way from the duodenum and multiply and set up pancreatitis. Moreover, the obstructed secretion may be forced backward into the parenchyma of the gland producing injurious effects. Opie has collected 32 cases in which pancreatic lesions and fat necrosis were associated with cholelithiasis. In one case a calculus had found its way into the pancreatic duct and caused suppuration. In 26 out of the 32 cases there was fat necrosis. In 1889 Thayer reported the case of a man, aged 60 years, who in the last 16 months of life had repeated attacks of pain in the left hypochondrium and epigastrium followed by jaundice. He became collapsed and died. At the necropsy the thickened gall-bladder was found to contain over 100 calculi. The common bile-duct was dilated to the size of the little finger and in the duodenum was a stone of the size of a hazel nut. The pancreas was large and reddish-brown and there was necrosis of the surrounding fat. In 1896 Kennan reported the case of a woman, aged 36 years, who was suddenly seized with vomiting and pain in the upper abdomen which were followed by collapse. Death occurred in 48 hours. At the necropsy a stone of the size of a pea was found projecting from the papilla and other stones were found in the gall-bladder and common duct. The pancreas was enlarged, intensely congested, and surrounded by local peritonitis. Dr. Wiener relates the following case. A woman, aged 41 years, the mother of three children, was suddenly seized with violent pain in the upper abdomen on Jan. 28th. On Jan. 30th the pain had increased and become colicky. The whole abdomen was tender and the right rectus muscle was somewhat rigid. Appendicitis was diagnosed. In the evening, when Dr. Wiener first saw the patient, the face was pale and anxious; the pulse was 120, somewhat irregular, soft, and compressible; and the temperature was 102·5°. The epigastrium and right hypochondrium were tender and the right rectus muscle was somewhat rigid at the level of the umbilicus. In the right flank was moveable dulness. A two-inch incision was made along the outer border of the right rectus muscle at the level of the umbilicus. On opening the peritoneum some clear fluid escaped. The omentum was studded with small opaque yellowish-white patches. The gall-bladder was distended and there was a large stone in the cystic duct. It was pushed back into the gall-bladder and cholecystectomy was performed. The head of the pancreas felt hard but it was not enlarged. Recovery followed. A piece of omentum which was removed for examination proved to be the seat of fat necrosis.

TOXIC AMBLYOPIA AND OTHER LESIONS DUE TO THE USE OF WOOD ALCOHOL.

IN the *Philadelphia Medical Journal* of May 9th Dr. J. W. Sherer gives an account of the dangers due to the consumption of methyl or wood alcohol in the case of five persons, four of whom had taken part in the festivities of a national holiday, the celebration of the event being marked by the free consumption of cheap alcohol largely consisting of wood spirits. The host, a man aged 32 years, provided himself on July 4th with a considerable quantity of cheap crude spirits of which he himself and his guests, three in number, partook freely on the following day. Within 24 hours he suffered from nausea and attacks of vomiting, headache and vertigo, sweating and partial paralysis, and stiffness of the legs which lasted for three days. About 24 hours after the debauch his vision began to fail and he could only dimly perceive large objects outside the central part of the field of vision. In the centre of the visual field there was total absence of sight (central scotoma) in both eyes. The pupils reacted to light and accommodation and ophthalmoscopic examination showed that the fundus in both eyes was redder than normal and considerably mottled. The sense of colour perception was entirely lost. The characteristic lesions of the eye produced by the drinking of methyl or wood alcohol and of drugs containing methyl alcohol have been described by Professor G. E. de Schweinitz and an account of the same was published in an annotation in THE LANCET of June 7th, 1902 (p 1615). Dr. Sherer adds that the second man who took part in the drinking debauch was less severely affected. He suffered from nausea, dizziness, vomiting, and headache. His eyesight became dim and this dimness lasted for a few days and then began to improve until in three weeks' time vision was quite normal. The third man drank more deeply than his companions, with the result that he had several attacks of vomiting and became very prostrate; he grew delirious and comatose, in which condition he died within a period of 48 hours. The fourth man became totally blind in two or three days and his sight has never been restored since then. The fifth case referred to by Dr. Sherer was that of a woman who swallowed a "small medicine-glassful" of methylated spirits in order to obtain relief from pain attending menstruation. Her condition became worse and she suffered from dizziness, vomiting, and severe headache soon after taking the spirits. At the end of 24 hours her sight began to fail and on the third day she could only dimly recognise large objects in the margin of the field of vision. Central vision was absolutely lost. The pupils reacted to light and to accommodation. Dr. Sherer states that a search through medical literature revealed 25 cases of toxic amblyopia due to wood alcohol. In all of these cases, as in the five cases reported by himself, the loss of central or macular vision was complete in character and generally permanent in duration. The pathological process is a retrobulbar neuritis of the optic nerve, affecting chiefly the axial bundle of nerve fibres arising from the macula lutea. The perception of red is lost first and then the dimness of sight progresses until central vision is lost. Of the 25 cases recorded in literature 23 resulted from the ingestion, and two from the inhalation of methyl alcohol. The latter cases were as grave as the former and the symptoms of dizziness, nausea, frontal headache, and loss of central vision which followed were similar in both sets of cases. Persons should avoid incurring the danger of inhaling the fumes of methyl alcohol, while the use of this substance in medicinal tinctures should be prohibited, adds Dr. Sherer, as a criminal offence. As regards treatment Dr. Sherer points out that no method has yet been proposed for treatment and that cure is almost impossible, since the destruction of the ganglion cells in the macula lutea of the retina and of the nerve fibres arising therefrom constitutes an organic lesion the results of which are irreparable.

INFANT MORTALITY IN BOMBAY, ITS CAUSES AND PREVENTION.

Mr. Dosabhai Rastamji Bardi, senior tutor of the Grant Medical College, Bombay, has reprinted from vol. vii. of the Bombay Medical and Physical Society's Transactions a valuable paper from his pen drawing further attention to a matter of the highest importance. An infant mortality of 593 per 1000 births and of 867·67 per 1000 of the population amongst children under one year of age recorded during 1899 is certainly very disquieting, especially so when we find that matters have been growing worse year after year. The acting health officer in his report for 1899 says: "The infant mortality can only be called appalling, a little less than one quarter of the total mortality being of children under five years of age and the greatest mortality of any age is that of infants under one year." For the eight years 1892–93 to 1899–1900, 70 per cent. of the total child mortality was amongst infants under one year of age. Thus there is nearly seven times the mortality of infants under one year of age compared to the mortality in England. The state of affairs which is revealed by the figures of infant mortality is alarming and unless serious and earnest efforts are made to improve it Bombay must be prepared to rank very low in the scale of civilisation and to have a permanent stigma on its sanitary condition. In addition to the ordinary conditions which bring about the deaths of children in all communities the special causes in Bombay appear to be the unhealthy surroundings, both natural and artificial, abject poverty rendered more keen and unbearable by famines and epidemics, and the superstitions and prejudices of the ignorant masses. Since 1892 there has been a steady increase in the number of the still-births; these have nearly doubled within a decade. The broad groups of maladies causing deaths among infants show that infant life is not so resistant to diseases as it ought to be and has not that recuperative power which a growing body ought to have. Debility and respiratory and nervous diseases cause the greatest havoc among infants. The number of still-births is a proof that infants are not born in healthy surroundings or such as are likely to favour their growth and vitality, and, further, that they are not sufficiently well nourished in utero. The paper contains several tables, one of which (Table IX.) deals with the "causes of deaths in children under five years of age in different castes and races," and shows that one factor in the causation of increased mortality in infants is a low social scale. The remarks of the health officer in his report of 1899–1900 to the effect that small-pox was confined to children below the age of five years and was worst during the first year of life sufficiently indicate the necessity of making efforts to vaccinate all infants before they are four months old. It is a curious and significant fact that among the poorer as well as the higher classes there has been a general complaint of want of breast milk in nursing mothers; infants are therefore subjected to artificial feeding—a serious menace to the health and growth of the infant population and one which points to a deterioration in the health of mothers, due to bad hygiene, debility from mismanagement during and after parturition, effects of poverty, and other similar causes requiring careful and thorough investigation. Mismanagement during childbirth is an important factor in the high early death-rate and the writer draws a vivid picture of the dirty, overcrowded room in which the Hindu female is confined and of the after-treatment she receives. Mr. Bardi draws attention to the circumstance that many women of the labouring classes are bread-winners and though they may have a proper and good supply of milk they cannot for obvious reasons keep regular hours for feeding their infants; therefore in the course of time the good milk gets deteriorated in quality by being retained in the breasts for long hours. As a remedy he suggests the building of *chawls* for the mill operatives and nurseries in connexion with the mills where women can leave their infants in charge of good nurses and feed them at proper intervals. In discussing the different food substitutes for mother's milk, Mr. Bardi calls attention to the difficulty of obtaining a good supply of cow's milk, to the absence of control over milch cattle and their owners, and to the notorious fact that the people of Bombay are very badly off in the matter of their milk-supply. Mr. Bardi says that the milch cattle stables in many parts of Bombay display a state of affairs not at all creditable; they are ill-kept, ill-ventilated, ill-drained, overcrowded, unpaved or badly paved, and situated in populous localities—"the food given to the animals is generally of the coarsest and very often little more than stable refuse, and they are watered from the nearest dirty tank." The remedial means for the heavy mortality should, the writer suggests, be in the direction of—(1) adoption and enforcement of sanitary laws and measures; (2) education of the masses, with special reference to knowledge of the first principles of hygiene by tracts, lectures, and the like; (3) minimising the ill-effects of the necessary industrial conditions of the poor; and (4) the establishment of large lying-in asylums and the building of sanitary houses for the poor.

RECENT CENSUS PUBLICATIONS.

IN the course of last May two important blue-books were issued from the Census Office. The first consists of a volume of summary tables extending to 300 pages and showing the area and number of houses and of population (with details as to occupation) for England and Wales as a whole—the corresponding facts for the several counties having been published in 53 separate "county parts," at intervals during the previous two years. The second volume contains the census returns for the "Islands of the British Seas," separate details being given for (1) the Isle of Man, (2) Jersey, and (3) Guernsey and the adjacent islands. In a preface we are informed that although the results of the census were tabulated, analysed, and published in England and the schedules and other necessary documents were supplied by our Census Office, nevertheless the enumeration was actually carried out locally by the authorities of the several islands concerned. The ground covered by the present volume is similar in character to that of the corresponding volume issued after the census of 1891; according to the introductory note, however, the tables relating to the occupations of the islanders have, in common with those of the mother country, been considerably elaborated and a table has been added, identical in form with the English table, showing the ages of married and also of unmarried people in each of the islands included in the returns. To the student of statistics the blue-book first referred to may be considered in some respects the most useful publication of the census. The county parts will, of course, be referred to for minute local details concerning those areas, especially when the alphabetical index is available, the publication of which is promised at an early date; but for the ordinary reader the summary tables will furnish all the information required for a general survey of the results of the recent census. In a work of such colossal proportions as the present, involving the preparation and seeing through the press of not less than 53 folio volumes, each containing at least 37 full-page tables, it would be unreasonable to expect complete freedom from mistakes; but we are willing to admit that the table of *errata* which forms the concluding portion of the present volume is not more extensive than might have been anticipated, having regard to the complex nature of the undertaking. Like its predecessors the present volume is signed by Mr. W. C. Dunbar, Registrar-General, by Mr. N. A. Humphreys, and by Dr. J. F. W. Tatham. In a brief introductory note the signatories state that the final report on the census is now in hand and will be published with all despatch compatible with the exercise of that care which the importance of the work demands.

DIPHTHERIA AND PREGNANCY.

The *Gazette Hebdomadaire des Sciences Médicales de Bordeaux* of May 17th contains an interesting paper on the above subject by Dr. Chambrelent and Dr. Micheleau in which the following case is described. A woman, aged 44 years, eight months pregnant, was admitted to hospital on March 1st. Eight days previously her throat became sore and hoarseness, aphonia, and difficulty in breathing soon followed. On admission there were all the signs of laryngeal obstruction, stridor, retraction of the supraclavicular and suprasternal fossæ, and turgescent cervical veins. The throat was red but no false membranes were seen. The temperature was 101·4° F. and the pulse was 120. Antitoxin was injected. Two hours after admission the dyspnœa had so increased that tracheotomy was necessary and membrane was expelled through the tracheotomy wound. A second injection of antitoxin was given and the respiration became almost normal. On the following day the temperature had fallen to 97·7° and the pulse to 100. The fœtal heart was heard. On the next morning the dyspnœa recurred. On the left side of the chest no respiratory sounds could be heard and on the right the respiratory murmur was weak. Aspiration through the tracheal wound failed to remove any membrane. The fœtal heart was distinctly heard. After consultation it was decided to induce labour and to make arrangements for Cæsarean section should death supervene. A long œsophageal bougie was introduced into the uterus. The bougie fell out after two and a half hours and no uterine contractions were apparent. Death occurred at 3 A.M. on the following morning. An attempt to introduce the hand into the uterus in order to perform version and to extract the fœtus failed since the os was not dilatable. Cæsarean section was at once performed. The fœtus showed no signs of life and all means of resuscitation failed. The necropsy showed that the larynx was covered with false membrane but that the trachea was free from it. The bronchi as far as the branches of medium calibre were lined with membrane. The lungs were emphysematous and there was emphysema of the mediastinal tissue. In the small bronchi was sero-purulent exudation. The false membranes yielded on cultivation the long bacillus diphtheriæ and diplococci. Very few cases of diphtheria in pregnancy have been recorded. All writers regard the condition as grave. Of 12 published cases in which antitoxin was not used six were fatal but four cases in which it was used were all successful. An interesting point is the great tendency of the diphtheritic process to extend to the larynx, as in children, and contrary to what is usual in adults. Thus in 12 cases published before the introduction of antitoxin tracheotomy had to be performed seven times. It is noteworthy that in the case now recorded there were no signs of uterine contraction although the asphyxia of pulmonary disease is regarded as one of the most important causes of abortion. The diphtheria bacillus was not found in the fœtus but its toxins appeared to have produced profound alterations in the fœtal organs. The myocardium showed signs of degeneration. The spleen was congested and the seat of interstitial hæmorrhages The liver also showed interstitial hæmorrhages, accumulations of leucocytes in the portal spaces, and degeneration of the hepatic cells. The kidneys showed similar but less marked changes. In the lungs there were interstitial hæmorrhages.

THE DISTRIBUTION OF PLAGUE.

As regards the Cape Colony the acting medical officer of health states that for the week ending May 16th the condition of the various places mentioned below with respect to plague was as follows. At the quarantine station, Saldanha Bay, 2 Asiatic males remained under treatment in the hospital, both being convalescent. At Port Elizabeth 2 cases of plague were discovered—namely, 2 native males on May 11th and 13th respectively, 1 being found dead. At the Plague Hospital 1 European female, 2 native males, and 1 native female were discharged recovered during the week, leaving 10 cases under treatment. Plague-infected rats continued to be found in the town during the week. At East London 3 cases of plague were discovered—namely, 1 Indian male on May 10th, 1 coloured male on the 15th, and 1 European female on the 16th. At the Plague Hospital 1 coloured male and 1 native male died during the week, leaving 3 cases under treatment. At King William's Town 1 case of plague was discovered—namely, 1 European female on May 10th. At the Plague Hospital 1 native male died and 1 European female was discharged recovered, leaving 5 cases under treatment. At Graaff-Reinet and Burghersdorp no cases of plague and no plague-infected rats were discovered during the week. At Queenstown plague-infected rats were discovered in the town. In the Cathcart district during the week a plague-infected rat was discovered in the police camp, about one and a half miles from Thomas River Station. As regards Hong-Kong a telegram from the Governor, received at the Colonial Office on June 4th, states that for the week ending May 30th there were 123 cases of plague, 4 in Europeans, with 103 deaths.

EMPYEMA NECESSITATIS WITH THREE PULSATING TUMOURS.

In the *New York Medical Journal* of May 9th Dr. F. P. Henry has re-published a case which he recorded in the Transactions of the Philadelphia County Medical Society for 1881. He has done so wisely, as the case is very uncommon and is practically inaccessible to students of the rare condition of pulsating empyema. A woman, aged 30 years, was admitted to hospital on April 14th, 1880. On the left side of the chest were three strongly pulsating tumours—one in the mammary region of about the size of half a large orange, a smaller conical one in the eighth intercostal space in a line with the anterior axillary border, and the largest one, four inches in diameter, in the postero-inferior region. On palpating the first tumour splashing sounds were produced and a sensation was felt like that of handling a hernia. Evidently the tumour contained both air and fluid. The left chest was dull posteriorly as high as the middle of the scapula. The line of dulness curved downwards and forwards. The whole pulmonary area in front was almost tympanitic and the anterior tumour was decidedly tympanitic. The semilunar tympanitic area of Traube was absolutely dull. The respiration was amphoric except over the posterior tumour. Paracentesis at the site of the conical tumour yielded more than a quart of thick offensive pus. As some air escaped it was thought best to desist. The pulsation in the anterior tumour and the gurgling on palpation ceased and the posterior tumour greatly diminished in tension. The empyema was drained. Of the further history all that is known is that the patient was alive a year afterwards. Only 83 cases of pulsating pleurisy and only one other case with three pulsating tumours appear to have been recorded.

THE ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES.

WE have the pleasure of announcing that the Enno Sander Prize of the above association has this year been conferred upon a British military surgeon—namely, Major Frederick Smith, D.S.O., R.A.M.C. The subject of Major Smith's essay is "The Differential Diagnosis of Typhoid Fever in its Earliest Stages." The announcement of the fact that the prize went for this year to an officer of the British service was received by his American *confrères* with generous and prolonged applause and much pleasure was generally expressed at the honour which the association was enabled to show to a member of a service towards which all American medical officers feel so kindly. We are sure that this fact will go to cement still further the friendly relations which exist between Great Britain and the United States and to advance the labours of the members of the medical departments of the two great English-speaking nations of the world.

THE annual general meeting of the Poor-law Medical Officers' Association of England and Wales will take place on Tuesday, June 30th, at the Trocadéro, Piccadilly-circus, London, W., at 6.30 P.M. At 7.30 the members and their friends will dine together, Dr. Farquharson, M.P., the President, being in the chair. Any Poor-law medical officer desiring to be present is requested to communicate with the honorary secretary, Dr. M. Greenwood, 9, Copthall-avenue, E.C.

THE annual banquet of the Association of British Postal Medical Officers will take place on Friday, July 17th, at 7 for 7.30 P.M., in the Whitehall Rooms of the Hôtel Métropole, "to meet the Right Honourable Austen Chamberlain, M.P., His Majesty's Postmaster-General."

THE Cavendish Lecture of the West London Medico-Chirurgical Society will be delivered on Friday, June 26th, in the town hall, Hammersmith, at 8.30 P.M., by Professor T. Clifford Allbutt, the subject being Atheroma of the Ascending Aorta.

THE provincial meeting of the Society for the Study of Disease in Children will be held at Brighton on Saturday, June 20th. Several communications on interesting subjects have been promised.

A DINNER of the Durham University Medical Graduates' Association will be held at the Café Royal, Regent-street, London, W., on Thursday, June 25th, at 7.30 P.M.

THE sixty-fourth annual dinner of the Irish Medical Association will be held in the town hall, Enniskillen, on Wednesday, June 17th, at 7.45 P.M.

WEST CORNWALL INFIRMARY, PENZANCE.—At a meeting of the subscribers to this institution held on May 23rd, under the presidency of Prebendary Hedgeland, it was decided to enlarge the building. A quarter of an acre of land to the north of the infirmary will be purchased and the extension will provide for six more beds, the widening of the corridors, and other improvements. The cost of the undertaking is estimated at £4000.

THE ROYAL MEDICAL BENEVOLENT COLLEGE, EPSOM.

THE twenty-ninth festival dinner of the Royal Medical Benevolent College, Epsom, was held on June 10th in the Grand Hall of the Hotel Cecil, Strand, London. The chair was taken by H.R.H. the PRINCE OF WALES.

After the toast of "The King" had been proposed by the PRINCE OF WALES and duly honoured, Sir WILLIAM S. CHURCH, Bart, K.C.B., President of the Royal College of Physicians of London, proposed the toast of "Her Majesty Queen Alexandra, their Royal Highnesses the Prince and Princess of Wales, and the other Members of the Royal Family." He said that the Queen when she first came to this land captivated the people by her beauty, but since then the nation had learned to love her for herself. He thanked the Prince of Wales for filling the office of chairman on that occasion and reminded those present that the King was with the Prince Consort in 1855 when Epsom College was opened and as recently as 1895 the King had visited the College and laid the foundation-stone of the lower school. He concluded by describing how Princess Christian had worked for the improvement of hospital management and nursing.

The PRINCE OF WALES, in acknowledging the toast, said: In the name of the Queen and of the Princess of Wales and the other members of my family and on my own behalf I beg to thank Sir William Church for the very kind and flattering terms which he has used in proposing this toast and I am, indeed, most grateful to you all for the hearty reception which you have given to it. I know from the Queen and the other members of my family that the medical profession may ever rely on hearty sympathy and ready support in their work and in every undertaking which may tend to mitigate the suffering of our fellow creatures. So far as the Royal Medical Benevolent College is concerned I can assure you that the Queen remembers with great pleasure the visit she paid to the College with the King when he laid the foundation-stone of the lower school eight years ago. As Sir William Church has reminded us the Prince Consort opened the College almost 50 years ago and on that occasion he was accompanied by the King. I believe that it was not very many years ago when the King took the chair here at one of your festival dinners and on that occasion he got the largest collection of those days and I hope that to-night we shall beat it. I trust that my presence here this evening will be regarded as a proof that I continue to take the same interest in the College that my family have done since its foundation. As president of five of our large London hospitals I know what splendid service is rendered by the medical profession to those institutions. Also as president of the King's Hospital Fund for London I fully realise the valuable gift of their experience and time in assisting those who control the administration of the Fund. This assistance is most especially valuable in the all-important work of visiting and reporting upon the hospitals that are desirous of receiving help from the Fund. Deeply impressed as I am with what we owe to the doctors and surgeons of this country it gives me the greatest pleasure to take the chair here this evening, and I once more thank you all for the very hearty manner in which you have received this toast and for the kind way in which you have come here this evening to support me by your presence.

The PRINCE OF WALES, again rising, said: I have now the pleasure of proposing the toast of the evening, which is "Success to the Royal Medical Benevolent College." No excuse is necessary for pleading the cause on behalf of which we are assembled here to-night. The charitable institutions of our country are among those national characteristics of which we are justly proud; and I can hardly imagine that there are any more deserving of public support than those whose object is to help members of the medical profession or their families, who, through misfortune or otherwise, are brought to reduced circumstances. I feel that I am uttering a mere commonplace in stating that we all owe a debt of gratitude to the doctor. We cannot get on without him. He is with us on our entry into the world and when we leave it and is our confidential friend from the cradle to the grave. We consult him, confide in him, trust him, though he often has to tell us disagreeable truths. There are few of us who have not reason to be deeply grateful for his knowledge, tender care, and patient watchfulness, by which we have been brought through a severe and dangerous illness. Certainly I myself can speak feelingly as one of that number. But I go further: for over and above our individual thanks you will, I know, agree that our medical profession has earned the heartfelt gratitude of the whole nation; for, thanks to the marvellous progress in medicine and surgery and individual knowledge and skill, the life of our beloved Sovereign was, under the blessing of Providence, preserved to us during the past year. We must also remember, in estimating the splendid work accomplished by our hospitals, that nine-tenths of the medical advice—and this is certainly the best in the country—is given practically gratuitously. But the debt to the doctor is not merely one which is to be considered as discharged as soon as his bill for professional service has been paid. There remains the sense of gratitude which, I am glad to say, often not only finds expression in a sincere and lasting friendship between doctor and patient, but in thank-offerings by which this institution with other medical charities has materially benefited The question may be asked whether the medical profession should not be able to support its own charities without appealing to the public. In answer I would remind you that the popular idea that doctors are rich men is a very erroneous one. True it is that there are a few wealthy members of the profession, but these you may probably count on your fingers. I know, also, that great generosity is shown among these few to their necessitous brothers. Some are able to make a fair income and perhaps to save money, but too many are underpaid and struggle in an overstocked market, and the fact remains that there is an enormous residuum of medical men who live only from hand to mouth. Another common idea seems to be that doctors live for ever. Unfortunately here again is another fallacy. Too many succumb to the hard life of exposure by which their constitutions are undermined or to the dangers of infection. The two following cases are among those recently before the notice of the College. A medical man was summoned to go over the Wiltshire Downs to see a child who had been burned. On the way there he himself was struck by lightning and killed, leaving a widow and large family. A surgeon-major in the Army Medical Staff was compelled to retire from the service on account of complete loss of sight resulting from overwork and hardship on active service. He has a wife and five young children, is not strong himself, possesses but limited means, and partly supports his mother. But it is not only with these conditions of everyday life that the medical practitioner has to contend. We know how in actual warfare he risks and indeed often loses his life while tending those who have fallen in battle and we must not forget that many (I know that some of them are here to-night) gave up the comforts of home life and, regardless of any pecuniary sacrifice, volunteered for service in South Africa. To meet this distress about £14,000 a year is given by three great medical societies in the metropolis—the Medical Benevolent Fund, of which my old friend Sir William H. Broadbent is president, the Society for the Relief of Widows and Orphans of Medical Men, and the Epsom Medical College. The College was founded by Mr. John Propert in 1855 to supply the want which his experience as a family medical practitioner forced upon his notice. The school supports 50 boys on the foundation, the boys being clothed, educated, and maintained. There are also 50 aged or necessitous medical men or their widows who receive £30 a year and to maintain these £8000 a year is necessary. I am very glad to have had the opportunity yesterday of personally visiting the College at Epsom. I was delighted with everything that I saw there; indeed, one could not help feeling that the wishes and aspirations of the founder have been to a great extent fulfilled. I heartily congratulate the head master, Mr. Hart Smith, on the happy and healthy-looking boys under his charge whom I had the pleasure of seeing in the cricket field. But I wish it to be clearly understood that this appeal is not for the school proper, which is conducted as a public school and is self-supporting. It is for necessary funds to support its medical foundation—that is, the education of the 50 foundationers and to maintain the pensions to which I have just referred. And I am glad to be able to state that there are strong reasons for believing that if we receive to-night liberal support it will not be necessary to have recourse to further special appeals. My only regret is that this appeal has not been urged by someone more eloquent than myself. But no one could speak with more profound conviction than I do of the worthiness of the claim which the Royal Medical Benevolent College has upon the sympathy and generosity of us all. I now beg to propose, "Success to the Royal Medical Benevolent College," coupling with it the names of the president, my noble friend Lord Rosebery, and the treasurer, Dr. C. Holman. In its president the institution has to be congratulated. For Lord Rosebery, while ably fulfilling the duties of that office, proves himself to be a true friend and neighbour, showing a keen interest in the general welfare of the College as well as in the boys, their work and their recreation. I feel it presumptuous for me to speak about Dr. Holman. His name is familiar to everyone who knows Epsom College; he is the mainspring of its life. Associated with the charity since its foundation, he has for 16 years worked unceasingly as treasurer and has left a lasting proof of his efforts as an honorary local secretary in the £8000 which he has collected during 38 years in that office

This was responded to by Lord ROSEBERY, the President of the College, who said: My task on this occasion is happily a very small and insignificant one, for it is only to obliterate myself as soon as possible in favour of my working partner, Dr. Holman. Indeed, Sir, if I had had any idea of making an extended speech that would have been dispelled by the one to which we have just listened. The only part of that speech which I venture to disagree with is that in which you said that there can be a better and more effective chairman than yourself. I venture to challenge any orator, however practised he may be, to vie with the pathetic, the eloquent, and what is more the true, terms in which you have spoken of the medical profession. We have so many of them here to-night that I hardly dare to think and I scarcely venture to conjecture what may be the effect on their patients in London. The titled cynics of the profession in whose immediate neighbourhood I am sitting have given vent to their conjectures on the subject, but I will not venture to imitate them I will only hope that all may be for the best—and I think that I will pause there for fear I should give utterance to some imprudent sentiment. I confess that I do not like to call myself an impostor, yet this is the thought that is present in my mind now, but I am, strange as it may seem, an ornamental figure on this occasion. I am indeed President of Epsom College, but I am responsible neither for its teaching nor for its discipline as other presidents of other colleges are. If I were I might have to give a less favourable report on both than I conscientiously can on the present occasion. If I had my way I should like to exchange my office with that of the Bishop of Winchester and become a visitor of the College, because in that capacity I am genuine and frequent and should not blush to reply on behalf of the College as I do now. I am indeed at Epsom happily a neighbour and I have the great pleasure and privilege of being frequently a visitor of Epsom College owing to local circumstances, much more frequently I suspect than any occupant of the See of Winchester. Well, I can offer no report on the studies of the place and Mr. Hart Smith gives me no access to them and never asks my opinion or judgment on them, but as regards the more athletic features of the College I can say from some experience—as you, Sir, have been able to say from your experience of yesterday—that a finer and healthier and manlier lot of students exist in no other educational establishment; they live in the finest air in the world, they are kept carefully exempt from the temptations which are associated with the name of Epsom and they are, I believe, prepared to go anywhere or to do anything. There is only one drawback connected with the College and I hope that it may be the result of this meeting to-night to remove that drawback: it is the word "benevolent" in the title which I think is a considerable drawback to its success. I have lived for some years as President of the Royal Medical Benevolent College of Epsom and if I can die president of the Royal Medical College of Epsom I shall be content. I hope, Sir, it may be your destiny to-night to accomplish that great work. There have been many chairmen before you and there have been many successful banquets before this one, but I hope that when this is over we shall be able to say in the words of the psalm of triumph that whereas the chairmen before you have collected their thousands you have collected your tens of thousands.

Dr. HOLMAN, the treasurer, said that on behalf of his colleagues on the council of Epsom College he thanked His Royal Highness for his presence and for the terms in which he had commended the cause of the pensioners and foundation scholars of Epsom College. The present gathering was the largest ever seen in the metropolis in the cause of a medical charity and he hoped that His Royal Highness would accept it as the grateful recognition of his kindness in presiding. Personally he thanked His Royal Highness warmly for his speech, it contained much of what had been his opinion for so many years of the relation of the public with the medical profession which coming from His Royal Highness would, he hoped, leave a stronger and more lasting impression than coming from any medical man. He gratefully acknowledged the practical sympathy received from some members of the public who had recognised the services the medical profession rendered to society and to the public health. But since he had been engaged in preparing for this dinner he had come to handgrip with an attitude of mind which had apparently militated against a more generous recognition of the claims which the medical profession might justly make upon every section of society. That His Royal Highness should have recognised and placed them before that meeting was a matter of intense satisfaction. His Royal Highness had touched upon the question of medical men who earned large incomes. These men began to earn late, their work was personal and their harvest-time was short and he, Dr. Holman, bore testimony that they gave generously for the relief of the necessitous of their profession. There was a considerable class who might give each year sums which they would not miss but who seemed to shrink from giving because the amount would look small. THE LANCET had stated how much good would accrue if 10*s.* a year were contributed by each medical man, but if every practitioner in the United Kingdom would give half-a-crown yearly there would be no further anxieties for Epsom College. He thanked His Royal Highness for recognising that there must be suffering, want, and distress amongst them; accident and disease must attend upon the practice of medicine and when the bread-winner was gone how terrible were the straits to which the widow and children of such a man might be reduced. He ventured to indorse His Royal Highness's position that the medical profession had claims upon the public which were not sufficiently recognised. Hospitals were built and maintained by the public. Was sufficient thought given to those by whose labours the relief of sickness and suffering was secured within their walls? The medical profession supplied the staff, but to be a physician or surgeon to a hospital did not insure success in private practice. He had the pleasure to announce that since the preparations for the dinner had been in hand the two daughters of the late Mr. Leach of Shaw, near Oldham, had given the council £1000 to found a Leach Memorial Scholarship of £50 a year tenable for four years to be awarded without competition to a boy requiring assistance to enter at either Oxford or Cambridge, preference being always given to the orphan sons of medical men. The Anstie Memorial Scholarship held for the like term would now enable a scholarship to be awarded every two years.

The grand total of the subscription list was then stated to amount to £6526, this announcement being received with cheers.

The company separated after the Prince of Wales had departed, his exit being accompanied by the singing of "For He's a Jolly Good Fellow."

ROYAL INSTITUTION.—A general monthly meeting of the members of the Royal Institution was held on June 8th, Sir James Crichton Browne, treasurer and vice-president, being in the chair. Sir Walter J. Sendall, G.C.M.G., was elected a member.

CORK MEDICAL AND SURGICAL SOCIETY.—The annual general meeting of the members of this society was held on May 27th, Dr. P. T. O'Sullivan, the President, being in the chair. [illegible] £68 to the cred[illegible] elected for ne[illegible] President: Dr. N. Henry Hobart. Honorary secretary: Dr. D. J. O'Connor. Honorary treasurer: Dr. P. J. O'Brien. Council: Dr. P. T. O'Sullivan (retiring President), Dr. C. Y. Pearson, Dr. W. E Ashley Cummins, Dr. T. G. Atkins, Dr. H. R. Townsend, Mr. E. Murphy, Mr. P. G. Lee, and Dr. Lucy E. Smith. Dr. N. J. Hobart, who has retired from active practice after a professional career of 57 years, was unanimously elected an honorary life member of the society.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

THE KING AND QUEEN AT ST. PAUL'S CATHEDRAL.

THE very real interest taken by the King in the welfare of the hospitals and dispensaries of the metropolis was further emphasised by the visit of His Majesty to St. Paul's Cathedral on Sunday afternoon last, when a collection was made on behalf of the Metropolitan Hospital Sunday Fund, and when there were also present the Queen, the Prince and Princess of Wales, the Duke and Duchess of Connaught, the Princess Henry of Battenberg, the Princess Christian, the Duke of Cambridge, and other members of the Royal Family. The Cathedral was well filled long before the commencement of Evensong at 3.15. The congregation was largely composed of the middle and working classes, who joined their intercessions with those of their Sovereign and the Royal Family on behalf of the good work done in the [illegible] the [illegible] of Men of the words "especially those in the London hospitals for whom our prayers are desired," and a commendably brief and appropriate sermon by the Bishop of Stepney from the text, St. Luke xxii., 24, 25, and 26: "And there was also a strife among them, which of them should be accounted the greatest. And He said unto them, The kings of the Gentiles exercise lordship over *them*; and they that exercise authority upon them are called benefactors. But ye shall not be so: [illegible] let him be as the younger; [illegible] th serve." In the course [illegible] that there was nothing great in position unless it was used as a power for wider service; nothing great in wealth unless it was used as an opportunity for helping others. If this were forgotten, even though they seemed to succeed, they were making a great failure—they were abdicating the true royalty of human life, its capacity of compassion. And on that day an appeal came for their compassion with peculiar force and urgency. Hospital Sunday brought before their imagination the vast tide of pain and suffering which their hospitals were trying with such noble patience and devotion to stem. If one poor sufferer were brought before them there was not one of them who would not do what he could to help. But it was not one poor sufferer, but the 105,000 in-patients and the 1,670,000 out-patients in the London hospitals who were, as it were, laid at their door. And to lend, if it might be, force to their plea, their Gracious King and Queen with the members of the Royal house had associated themselves with it by their presence, illustrating the true royalty of compassion, proving once again that it needed no proof that here in England "the throne is upholden by mercy." Such an appeal on behalf of the poor and sick must act as a test of the real worth of their character. If it left them unmoved, asking only what was the least that could be expected of them, then their poverty of life was discovered; it was plain that the disease of selfishness was upon them. On the other hand, there was still, in spite of all their sins and shortcomings, some element of greatness left in them, something God-given and God-like, if their hearts moved forth to meet the appeal in the ardour of compassion. What might not be done to establish on a sure foundation those homes of mercy, to banish the shadow of anxiety which haunted the efforts of the devoted men who were responsible for them, if every person in that great congregation, rich and poor alike, asked, in eagerness for the answer, "What can I do, by thought and influence and self-denial, for the hospitals of London?" Lastly, if it were true of each individual man that his real worth was tested by his capacity of compassion, it was equally true of the community to which he belonged. The greatness of a nation consisted not so much in the number of its people or the extent of its territory or the mass of its wealth as in the strength and width and justice of its compassion. They were proud of the greatness of the city of London, but its size was a thing to appal, not to uplift, unless it spoke of one body in which the strong and the weak, the rich and the poor, were bound together by the ties of mutual help and common service. Its wealth was a mere golden idol upon feet of merest clay unless it was used as a trust for the public good, an opportunity for the exercise of compassion. Their hospitals stood in their midst as a constant reminder, "lest we forget, lest we forget" the true greatness of the city: St. Bartholomew's, witnessing in the very centre of the city to the kindness of an olden time; the London Hospital, rising above the crowded streets of the East-end; St. Thomas's, confronting the centre of the Empire's labours; St. George's, standing in mute appeal as the stream of wealth and luxury flowed around it. The hospitals were voices calling to London, "Remember, O remember, the Lord thy God; remember the trust with which He has charged thee; remember the poor, the suffering, and the stranger at thy gates." There were many signs that the city was not deaf to the call—the King's Fund, the generosity of men such as he who had again come forward to stimulate his fellow-citizens, the steady growth of the Hospital Sunday Fund. All these were tokens of a quickening of the public conscience. But could it be said that the wealth of London had yet risen to the height of its opportunity? If it had, would it be possible that the annual deficit of the hospitals should be £250,000? Already there were ominous declarations that the strain of raising funds had reached the limit of endurance and that ere long the hospitals of London must turn to the compulsory help of the rates. Doubtless a city could exercise much of its common service through its rates. Doubtless the skill of the physicians and the devotion of the nurses would not fail if the hospitals became public institutions. But good which was done under the compulsion of "must" could never have the moral worth of good which was done under the obligation of "ought." The performance of a public duty was a thing far finer, far more uplifting, when it was freely offered. To remove from the walls of our hospitals the old familiar words, "Supported by voluntary contributions," would be an act of moral retreat on the part of a great and wealthy city. The appeal of the hospitals for more assured and more continuous support was therefore an appeal to the honour of the city. God grant that that notable day might mark the beginning of a more resolute and sustained effort by the great city of London to prove that its power, like the power of God, from Whom it came and to Whom it was responsible, was declared most chiefly in showing mercy and pity.

The collection was taken by a staff of some 60 persons and realised £4300.

Special Meeting at the Mansion House.

A meeting of the members and supporters of the Metropolitan Hospital Sunday Fund was held at the Mansion House on June 8th, under the presidency of the LORD MAYOR of LONDON, to further the interest in our hospitals and medical charities. Among those present on the platform were the Lady Mayoress, the Archbishop of Canterbury, Sir R. Douglas Powell, Bart., K.C.V.O., Sir Frederick Treves, Bart., K.C.V.O., C.B., Sir William S. Church, Bart., K.C.B., Sir Sydney Waterlow, Bart., Sir William H. Broadbent, Bart., K.C.V.O., Mr. Wakley, Dr. J. G. Glover, the Archdeacon of London, Monsignor Stanley, Mr. Richard B. Martin, M.P., Rev. Prebendary Ingram, Mr. R. de Q. Quincey, Mr. Thomas Bryant, Alderman and Sheriff Sir G. Truscott, Rev. Prebendary Ridgeway, Captain A. Palliser, Rev. A. Harlow, Sheriff Sir Thomas Brooke Hitching, Rev. G. H. Pearce, Rev. Canon McCormick, Rev. C. H. Grundy, and Mr. F. H. Norman.

Letters of regret for absence were received from the Bishop of London, the Bishop of Rochester, the Bishop of St. Albans, the Bishop of Islington, the Bishop of Kensington, the Bishop of Barking, the Bishop of Southwark, the Dean of Windsor, Monsignor Poyer, the Dean of Westminster, the Rev. Canon Fleming, Dr. Hermann Adler (Chief Rabbi), the Duke of Norfolk, Lord Stamford, Lord Sandhurst, Sir Edwin Durning Lawrence, Sir Savile Crossley, Bart., M.P., Sir Horatio Davies, M.P., Mr. C. E. Tritton, M.P., and others.

The LORD MAYOR in opening the proceedings said that they had met with the object of advocating the claims of the Hospital Sunday Fund and he was pleased to tell his hearers that an excellent beginning had been made by the collection at St. Paul's Cathedral on June 7th which amounted to £4300. How greatly this result was owing to the action of the King and Queen only those closely associated with the Fund could know, and he sincerely hoped and believed that the noble example set by their Majesties would permeate all congregations on June 14th so that their Majesties might have the gratification of knowing that their work had not been in vain and that the collection this year would be a record one.

The Archbishop of CANTERBURY, in moving

> That in view of the great interest taken by their Majesties in promoting the welfare of the metropolitan hospitals this meeting pledges itself to use every effort to make the Hospital Sunday collection a "record" one this year,

said it was necessary to emphasise the fact that the corporate life of which they were ordinarily proud was not an empty dream and that those who deliberately set on one side the claims of the London hospitals were placing themselves outside the pale of citizenship altogether. So definite was the call upon them all, and so real and certain were the needs, that he failed to understand the position of those who, while claiming the position and responsibilities of their common life, did not respond to that call. He knew of no other way in which the responsibility of the strong for the due care of the weak could be so obviously shown and exercised as by supporting the Fund which brought them together that day. Chivalry was the first characteristic of some centuries of their nation's life. A good many years ago chivalry was defined as "the reverence of strength for weakness." They were showing that reverence in pleading for the London hospitals. Who would not be chivalrous? Nearly 400 years ago, in his "Utopia," Sir Thomas More set forth his idea of what was obviously the right and proper way in which a nation with great cities should carry on its work and a good many of those present would no doubt recollect the emphasis which he laid on the part that hospitals must take in the life of his ideal community. In the second book of the "Utopia" were to be found the following words:—

> For in the circuite of the citie, a litle without the walles, they have iiii. hospitalles, so bigge, so wyde, so ample, and so large, that they may seme iiii. litle townes, which were devised of that bignes partely to thintent the sycke, be they never so many in numbre, should not lye to thronge or strayte, and therefore uneasely, and incommodiously and partely that they which were taken and holden with contagious diseases, suche as be wonte by infection to crepe from one to another, myght be layde apart farre from the company of the residue These hospitalles be so wel appointed, and with al thinges necessary to health so furnished, and more over so diligent attendaunce through the continual presence of cunning phisitians is geven, that though no man be sent thether against his will, yet notwithstandinge there is no sicke persone in al the citie that had not rather lye there then at home in his owne house.

From the statistics which they held in their hands his hearers would see how far short London fell four centuries later of the ideals set forward even in Tudor times as regarded either the amplitude of our supply or the necessary funds for its maintenance. But in one other respect we had realised to the full the ideal of the great thinker of the sixteenth century, for we should find it hard to mend the condition of things as regarded what he called "diligent attendance" and "continual presence of cunning phisitians" who were there, and in these later days we had devised something of which Sir Thomas More never dreamed in that great complement to the physicians' work—the presence of a devoted band of nurses. A perusal of the rules relating to nursing 100 years ago would show how much we owed in the present day to the skill of thousands of competent and devoted women who had learned their art in the hospitals. How was it, the Archbishop asked, that the necessity arose year by year to go through the annual process of absolutely entreating the public to do so obvious a duty as the supply of the necessary funds for the maintenance of our hospitals? It was not because people who really knew did not care. It was because those who ought to care did not know and it appeared practically impossible to bring the facts home to them. A few years ago when we were at war, as soon as the needs of the sick and wounded were made clear to England, there was no lack of money to supply those needs. But in the ordinary round of our common prosaic life the needs of our hospitals at home slip out of sight. If we realised how London was crying out at the present time for help for the sick and suffering in our hospitals the miserable annual dole of £50,000 or £60,000 would be multiplied by ten within a week. It would, however, be wrong not to recognise the amount of good that was being done by no small number of rich people quite outside the range of the Hospital Sunday Fund. For the work of these people they the public with tho duty which the corporate life imposed upon them.

the motion, referred to his sympathy and su nday Fund since its foundation, a fact which showed the worthiness of the charity. The committee of the Fund consisted of prominent and well-known men of all denominations who devoted their skill and time to the work of the distribution of the Fund. The laws of the constitution of the Fund enacted that the participating hospitals should have their accounts properly kept and there was a clause in one of the laws which insisted upon the necessity of hospital managers seeing that their charity was not abused. These facts showed how admirably the Fund was administered. As to the educational value of hospitals he felt sure that any patient who entered the wards of our healing institutions could not fail to be filled with the spirit of order and cleanliness. In the wards of the hospitals he would also learn self-denial and self-restraint, virtues which, perhaps, he had never thought of before. The education gained in the wards of the hospital would also, in all probability, be reflected in the patient's family life. In addition to the satisfaction of helping the suffering poor, those who subscribed to our healing institutions should remember that the large and well-equipped hospitals were the fertile centres of advancing medical science. Cases that were treated in the hospitals frequently formed the subject of discussion and interest and valuable information was thus spread among medical men throughout the country. Thus those who were able to subscribe to our hospitals would reap a reward in their hour of need. With the advance of medicine and surgery hospital expenses necessarily increased. At one of the hospitals to which he (Sir Douglas Powell) had the honour of being attached £1200 had recently been spent but this outlay he advancement ient which they brought about. With this increase in the cost of hospitals and appliances better and quicker results were obtained for the patients. He could recall the time when many diseases, medical and surgical, but particularly the latter, used to occupy the beds in the hospital for six, eight, and 12 weeks; now the same cases were discharged in one-half, one-third, and even one-quarter of that time. Therefore, although the expenses might be increasing, the cost per patient, owing to the larger number passed through the same number of beds, was by no means proportionately the same. A short stay in hospital meant a lessened degree of suffering, a quicker return to home life meant a speedier return of wage-earning power, a vast gift to the community. With regard to the use of stimulants, the expenses of hospitals had been greatly diminished. The amount of stimulants given 30 years ago was greatly in excess of that which more recent experience had led them to recognise as useful and to-day alcoholic stimulants were definitely prescribed by physicians and their effects were jealously watched throughout the time the patient remained under treatment. Hundreds of pounds yearly were saved to the hospitals by this watchfulness on the part of those in authority. It might be said that if these institutions were of such public value why not make them rate-supported? Why, it might be asked, should busy, hard-working, and generous people have all this anxiety and trouble to raise funds to keep them going? Reasons might be urged in favour of such a change, but if hospitals were placed on a business footing in this way the qualities of love and mercy now associated with them would vanish and that would be a great loss. The Bishop of Stepney in his sermon at St. Paul's Cathedral on June 7th had said that good done under the compulsion of "must" had not the moral worth of that done under the compulsion of "ought" That represented very much what he (Sir Douglas Powell) wished to say. Let them still endeavour to go on rendering those deeds of mercy to the sick poor and he trusted that the splendid advocacy which many of them heard in St. Paul's Cathedral on June 7th would be repeated throughout London and the country next Sunday and that the response would be such that there would be no necessity for placing hospitals upon the rates.

Sir FREDERICK TREVES, who supported the motion, said that it was almost impossible to realise to what an enormous extent poor man could find shelter when ill or injured. It had now become an absolutely necessary institution in which to carry out methods used in treatment which a quarter of a century ago were entirely unknown. These included hypodermic injection, Roentgen rays, the serum treatment, the treatment by baths, the treatment by the Finsen light, and, above all, the treatment by operation. The extent of the increase in surgical treatment had been almost incredible. 20 years ago the greatest hospital in the metropolis—the London Hospital—possessed only one operating theatre which was occupied only one day in the week. It now possessed five, which were occupied every day. Hospitals at the present time appealed to an enormously increased section of the public. So elaborate were some of the methods of treatment that they could not be carried out at any other place except at a hospital. A broken limb was set under the x-ray light—and that could not be applied in the cottage of the artisan. 20 years ago the hospital was not a popular place. People had a dread of it and they had some reason for their dread, but now the pressure for admission into all the great London hospitals was so enormous that it was scarcely possible reasonably to cope with it. Treatment was extended in hospital to an increased section of the population which included people who might be said to represent almost the backbone of the country. The question might be asked, "What do the charitable public get in return for all their ma faction of having taken par They obtained so much that over. In this country all medical education lay in voluntary hospitals and the efficiency of the medical men who were in practice and who would be in practice in the future depended on the efficiency of our great hospitals. As soon as the hospitals languished from want of funds the effect would be immediate upon our children and grandchildren.

that in a little time a cure would be discovered for cancer. Could he mention any sum, however large, that would represent the value of the gift to the world of that piece of knowledge? It would be discovered, he had no doubt, by some private person in a voluntary hospital as a result of researches carried out there at his own expense and it would be presented to the world absolutely free. They might say that that had not come yet, but a thing as big as that had already come to pass Could any sum of money express what had been the worth to the world of the gift of antisepticism? It was not a mere question of saving pain but of saving life to a degree of which the significance had hardly yet been grasped. That was a free gift to the world by a man who discovered it as the result of researches conducted at his own expense in a voluntary hospital; and he was sure that Lord Lister would say that without the voluntary hospitals of this country—without that liberal attitude which the governing bodies had shown towards scientific work—antisepticism, with its magnificent results, might have been still unknown to the world. Therefore, he thought that, from the lowest point of view, those who had been most generous in supporting our voluntary hospitals could claim that they had had some return for their much-appreciated kindness. There was no more important monument to the British race than the hospitals supported by voluntary contributions and it would be a great loss with no corresponding advantages if the hospitals should become State-supported.

The motion was then agreed to.

Sir WILLIAM S. CHURCH moved a vote of thanks to the Lord Mayor which was seconded, in the absence through illness of Cardinal Vaughan, by Monsignor STANLEY and agreed to unanimously.

In his reply the LORD MAYOR said that the cause which they had met to promote was one in which all creeds participated and he expressed his regret that the Chief Rabbi was unable to be present in consequence of an accident which had befallen him. He (the Lord Mayor) particularly wished to point out that the Metropolitan Hospital Sunday Fund was as much the Fund of the poor man as of the rich man and contributions from a shilling and upwards would be thankfully received.

THE MEDICAL, SURGICAL, AND HYGIENIC EXHIBITION.

(*Concluded from p. 1613.*)

Surgical and sanitary appliances formed an important feature of the exhibition this year; under the former we may include electrical apparatus such as is now employed in a number of therapeutic applications and apparatus for the production of a rapid vibratory movement; under the latter may be mentioned examples of special sanitary ware for hospital use, filters, and disinfectants and soaps.

Messrs. Doulton and Co. (Lambeth, S.E.) devoted a good deal of space in the entrance hall to the exhibition of sanitary fittings specially designed for hospital use. Amongst the exhibits were the following: A hospital closet fixed so as to be clear of the floor on iron brackets imbedded in the pottery and provided with a vitreous enamelled pipe to connect the cistern to the closet; a white glazed fireclay sink to be used in the cleansing of either bed-pan or urine bottle and provided with a special combination of hot- and cold-water valves, so that the utensils may be washed out with water at any desired temperature; an elbow-action operating lavatory waste and supply, both being worked by the elbow, while the temperature of the water can be readily adjusted by the same means; and lastly, a white vitreous enamelled cast-iron mortuary table. Messrs. Hendry and Pattisson, Limited, (11, Hill's-place, Oxford-street, London, W.), exhibited a model of a hospital ward stove which supplies a constant stream of pure warm air to the ward besides affording the radiant heat of an open fire in the ordinary manner. It is claimed that the warmed air is not burnt or "devitalised." The stove certainly has a cheerful appearance and from its construction should be economical in use. The treatment of disease by radiant heat and light by the Dowsing method was demonstrated by the Dowsing Radiant Heat Co., Limited (24, Budge-row, Cannon-street, London, E.C.). Close by was a stall devoted to the exhibition of an automatic aerator by the British Automatic Aerators, Limited (Alderman's House, Alderman's Walk, Bishopsgate, London, E.C.). The arrangement enables the aeration of the ordinary water-supply to be made directly without agitation or pumping. The apparatus would seem to be admirably suited for hospital use and it is said that by means of this machine the cost of producing 2000 glasses of aerated water is 6*s.* 6*d.*, or at the rate of 24 glasses for one penny. The Berkefeld Filter Co., Limited (121, Oxford-street, London, W.), showed many forms of their well-known filter which provides a filtrate free from germs so long as proper attention is paid to its regular cleaning and sterilising. We noticed also a rapid tap filter which was shown by the Tap Filter Co. (134, Charing Cross-road, London, W.C.). The use of this filter certainly produces a clean bright water but no evidence is offered so far as we could ascertain as to its removing pathogenic organisms. Messrs. J. Defries and Sons (146 and 147, Houndsditch, London, E.) exhibited a number of Pasteur filters and some illustrations of the Equifex disinfector. Safest of all methods as regards sterilising water is distillation and for domestic purposes the Gem Pure Water Still of the Gem Supply Co., Limited (121, Newgate-street, London, E.C.), is convenient and useful. The hygienic steel bin of the Young's Patent Hygienic Bin Co. (72, Mark-lane, London, E.C.) should be mentioned as offering a clean receptacle for flour, &c., in which there are no internal corners or crevices. Particles cannot thus lodge to become stale and to infect, it may be, fresh additions to the bin. The London Necropolis Co. (121, Westminster Bridge-road, London, S.W.) devoted the space at their disposal to some illustrations and descriptive matter of the process of "natural interment" which they advocate. The coffin aids rather than hinders the natural dissolution of the body. There were not many examples of disinfectants shown. Messrs. Newton, Chambers and Co. (Thorncliff, near Sheffield) exhibited their izal preparations, while the stall of the Jeyes' Sanitary Compounds Co., Limited (64, Cannon-street, London, E.C.), was devoted chiefly to the exhibition of Jeyes' fluid disinfectants, sanitary powders, and creolin preparations. The comparatively new soap preparation known as "petol" is worth attention (Petol Limited, 86, Cannon-street, London, E.C.). The basis of this soap is said to be of a purely vegetable origin, the name suggesting peat as a source. The soap has peculiarly bland properties and is specially well adapted for delicate skins; it is disinfectant and antiseptic and several forms of it for toilet and medical use are prepared. An excellent soap also is Oowana soap, which has received attention in our Laboratory Records (Oowana, Limited, 205, Victoria-street, London, S.W.). Messrs. Wright, Layman, and Umney, Limited (Southwark, London, S.E.), exhibited specimens of Wright's coal tar soap, an excellent sanitary adjunct, as well as some special pharmaceutical preparations. Mr. James J. Hicks (10, Hatton-garden, London, E.C) exhibited a great variety of clinical thermometers for the excellence of which his name is well known. The exhibit comprised also a sphygmometer (including a pocket form), opaque glass measures, and urinometers. Messrs. Leslies, Limited (Hopetoun House, Lloyd's-avenue, Fenchurch-street, London, E.C.), exhibited their well-known tape plasters besides antiseptic dressings, gauzes, strapping, bandages, and belts. Amongst the apparatus exhibited by the General Electric Co., Limited (71, Queen Victoria-street, London, E.C.), were complete sets for faradisation, for galvanism, for electrolysis and epilation, for galvano-cauterisation, for high-frequency treatment, and for the production of x rays. Surgical cutlery and instruments were well represented in the excellent assortment shown by Mr. W. K. Stacy (19, Newgate-street, London, E.C.). Messrs. H. W. Cox, Limited (9, Cursitor-street, Chancery-lane, London, E C.), exhibited x-ray and high-frequency apparatus We have more than once had occasion to mention the excellent results given in x-ray work by the apparatus of this firm. The Medical Supply Association (228, Gray's-inn-road, London, W.C.) showed a number of electro-medical apparatus and surgical instruments. The exhibit included the Gaiffe-Gallot electrolytic interrupter for working coils directly from a main alternating current. It is said that this interrupter gives a steady current and that no valves are required. The Improved Vibrator Co. (167, New Bond-street, London, W.) showed their apparatus for vibration treatment. The whole of the mechanism is inclosed in a flat circular case, and it can be regulated from the most gentle vibratory motion to any frequency desired. Messrs. Thomas Holland and Son (40, South Audley-street, Grosvenor-square, London, W.) exhibited their well-known natural-shaped boots and also their instep arch sock and bunion splint. Messrs. C. Bellack and Co. (12, Marble Arch, London, W.) exhibited a series of vibration instruments of which they are the makers; they are in particular the agents for the Muschik Vibrator. A very wide assortment of hospital appliances was exhibited by Messrs. Garrould (150 to 160, Edgware-road, Hyde Park, London, W.). The exhibit included antiseptic dressings, medical batteries, dissecting instruments, hypodermic syringes, invalid appliances, and many other forms of apparatus which go to make up the *armamentarium* of the surgeon and the nurse. The Marconi Wireless Telegraphy Co. (18, Finch-lane, London, E C.) exhibited apparatus for x-ray work. This company gives special attention to the insulation upon which the efficiency of the coil so much depends. A great number of surgical instruments was exhibited by the Holborn Surgical Instrument Co. (26, Thavies-inn, Holborn-circus, London, E.C.). The appliances for the lame of the O'Connor Extension Co. (2, Bloomsbury-street, London, W.C.) are well known, including their new support for flat-foot and other appliances for weak or deformed feet. Amongst examples of sanitary clothing shown were the aertex cellular clothing (underwear) of the Cellular Clothing Co., Limited (72 and 73, Fore-street, London, E.C), and the Kneipp mesh of the York St. Flax Spinning Co, Limited (2, Milk-street, London, E.C.). Examples of sanitary wood wool preparations, such as tissue, sheets, towelettes, and vaccination pads, were shown by the Sanitary Wood Wool Co. (26, Thavies-inn, Holborn-circus, London, E.C.). Natural mineral waters were represented in the purgative saline water of Friedrichshall (C. Opper and Co. 10 and 12, Milton-street, London, E.C.), and in the sparkling table water from the Rosbach springs (the Rosbach Co., 81, Commercial-road, Lambeth, London, S.E.). Finally, a few of the stalls were devoted to the exhibition of medical literature, the exhibits attracting general attention in this connexion being that of Messrs. D. Appleton and Co. (25, Bedford-street, Covent-garden, London, W.C.), the Scientific

Press, Limited (28 and 29, Southampton-street, Strand, London, W.C.), and Messrs. Rebman, Limited (129, Shaftesbury-avenue, Cambridge-circus, London, W.C.).

PREVENTION OF CONSUMPTION AND OTHER FORMS OF TUBERCULOSIS.

HEREFORDSHIRE.

THE latest branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis has been established in Herefordshire. The meeting at which the branch was inaugurated was held at Hereford on May 20th and was presided over by the Lord Lieutenant of the county, the audience, which numbered about 130 persons, having been brought together at the instance of the Herefordshire Medical Association. The first president of the branch is the Lord Lieutenant, and the Earl of Chesterfield, the Bishop of Hereford, the Dean of Hereford, the mayors of Hereford and Leominster, the Members of Parliament for the county, and the chairman of the county council have been invited to become vice-presidents. The meeting on May 20th was addressed by Dr. C. Theodore Williams who attended to represent the National Association. Dr. Williams spoke of the comparatively favourable position held by Herefordshire with regard to the death-rate from consumption and he attributed the diminution in the mortality from the disease over the whole of the United Kingdom as mainly due to the administration of the Factory Acts, to subsoil drainage, and to the improved condition of the working classes who now have better food and live in better houses than formerly. Although Dr. Williams admitted that the open-air treatment could be successfully carried out in private he advocated the erection of sanatoriums, because in them people were taught how to live and the influence which the patients exerted upon leaving such institutions did incalculable good among their acquaintances.

WINSLEY SANATORIUM.

On June 4th Lady Dickson-Poynder laid the foundation-stone of the Winsley Sanatorium for consumptive patients from the counties of Gloucester, Somerset, and Wilts. There was a large gathering which included the Bishop of Bristol, Sir John Dickson-Poynder, M.P., Lord Edmond Fitzmaurice, M.P., and Dr. L. A. Weatherly. An administrative block for 60 patients and bedrooms for 20 patients will be built at a cost of £6877 and as funds come in additional accommodation will be provided for patients until the full complement of 60 beds is made up. The funds in hand, after the purchase of the site and other expenses, are £6840 and the building and furnishing will involve an outlay of £8327. To complete the whole scheme about £9000 are required. The endowment of 15 beds in the institution has already been promised.

BELFAST.

The annual meeting of the Ulster Branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis was held on June 5th in the Medical Institute, College-square North, Belfast, Sir William Whitla being in the chair. The annual report, which was read by Mr. Robert Brown, the honorary secretary, stated that the death-rate from tuberculosis was decreasing in England and Wales but was increasing in Ireland, having risen from an average of 19 per 10,000 during the period 1870–75 to 23 per 10,000 in 1900. Dr. A. K. Chalmers, medical officer of health of Glasgow, delivered an address the title of which was "How to Reduce the Death-rate from Consumption."

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ELECTION OF MEMBERS OF COUNCIL.

THERE are only four candidates for the three vacancies on the Council. Mr. H. T. Butlin seeks re-election and Mr. Clinton T. Dent of St. George's Hospital, Mr. Frederic S. Eve of the London Hospital, and Mr. G. H. Makins of St. Thomas's Hospital are also applying. On only a few previous occasions have there been so few candidates.

Looking Back.

FROM

THE LANCET, *SATURDAY*, JUNE 11, 1825.

HOWEVER it may arise, whether because man is an imitative animal, or because his attention is roused to activity by the necessities which surround him, an ardent disposition to act *gregariously* may be plainly perceived; or, in other words, whatever may be commenced by one man is immediately prosecuted by a host of others. But this state of things does not commonly obtain long, some improvement is made, and other more inviting, or more profitable projects succeed, which forthwith, true as shadow to the substance, become the standing order of the day, till the bubble bursts, or till they are deposed to make room for some novel or more specious objects of pursuit, by which means the energies of the flock are directed into other and sometimes, though but rarely, more useful channels Whence arises the present apathy for mathematical investigations? Is it not because the sublime discoveries of NEWTON kindled a spirit of enthusiasm so ardent, that improvements were multiplied and perfection approached so nearly, that in our day the laurels to be gathered are comparatively few and extremely difficult to be obtained? Botany, too, has had its day, and Chemistry has lost much of the attraction which, in our juvenile years, it was wont to possess. CAVENDISH and BLACK, PRIESTLEY and LAVOISIER, are now almost forgotten, and even the name of DAVY is heard but seldom. At one period the study of this science was almost universal; and oxygen and hydrogen, and chlorine and nitrogen, "familiar in men's mouths as household words," manifested the interest which *it then excited, and which (agreeably to the general* law) has since been followed by a corresponding degree of neglect. That which is true of the science as a whole is also true of its various departments; and we have only to cite mineralogy as an example in order to show, that the ardour with which a subject may be pursued is strictly in proportion to its infancy, and that all sciences will be more and more neglected as they approach nearer and nearer to perfection, for it is the nature of men to endeavour to distinguish or enrich themselves. That mine will be most worked from which the greatest quantity of ore can be extracted; and that stream will be most frequented by anglers which most abounds with fish. This disposition, or fashionable mania, is far from being confined to philosophy or the arts, for in our own profession the same disposition to simultaneous movements obviously obtains, and particular diseases have particular æras in which they are cultivated with more than usual ardour, just as *epidemic* book-making among the profession always marches in the rear of pestilential visitations. But the extent of an evil is not to be inferred from the number of individuals who may sound the alarm; or, in other words, because a host of professional writers may start up at once, like the soldiers of CADMUS, it must not be inferred that the particular disease upon which they may choose to exercise their talents is therefore making dreadful, or more than ordinary, havoc amongst us, any more than that the downfall of our ecclesiastical establishments may be predicated from the senseless cry of "the church is in danger." Not long since nothing but consumptive maladies occupied the attention of the profession, and cart loads of books were written on the subject. Now, however, although the evil remains unmitigated and unarrested, that "song has ceased," and *spinal distortions* are become the reigning topic of the day.[1]

BATTLE OF THE CLUBS.

MEDICAL MEN AND FRIENDLY SOCIETIES: THE MEDICAL ACTS AMENDMENT BILL.

AT the Oddfellows annual moveable committee, held in Cheltenham last week, Bro. F. G. Green (South London) called attention to the introduction of the Medical Acts

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[1] Extract from Review of books on Spinal Distortions by John Shaw, Surgeon and Lecturer on Anatomy; and R. W. Bampfield, Surgeon to the Royal Metropolitan Infirmary for Diseases of Children. London. 1824. Longmans and Co.

Amendment Bill which was down for second reading in the House of Commons and underlying which, it was contended, there was an attempt on the part of the General Medical Council to place a very severe embargo on those medical practitioners who undertook contract work for medical associations connected with friendly societies. He said that it appeared to be the intention of the Council to endeavour to get placed on the Statute-book a measure giving it the power to withhold the diplomas and to remove the names of medical men from the Medical Register who undertook work at contract prices for medical clubs In his (Bro. Green's) locality they had had great difficulty with regard to medical men in this connexion and there it was that the "doctors' strike," as it was called, originated. That district had been the forerunner in regard to the promotion of the Bill to which exception was taken. The first clause in the "Bill to Amend the Medical Acts, 1858 to 1886," which was backed by Sir John Batty Tuke, Sir John Gorst, Mr. James Campbell, Sir Richard Jebb, Mr. Talbot, and Sir Michael Foster, read: "Where a person registered under the Medical Acts has been convicted in England or Ireland of any felony or misdemeanour, or in Scotland of any crime or offence, or has, after due inquiry, been judged by the General Council to have been guilty of infamous conduct in a professional respect, the General Council may, if it thinks fit, by order demand that the name of the person shall be, and remain, erased from the Medical Register," &c. Bro. Green said that the view was held in friendly society circles that the expression "infamous conduct in a professional respect" might, if the Bill became law, be applied by the Council to medical men in connexion with medical associations. He therefore moved:—

> That the Parliamentary agent be instructed to take the necessary steps with a view to opposing the Medical Acts Amendment Bill in the House of Commons.

Bro. A. Pinhorn (South London) seconded the motion. In the course of the discussion which ensued the view was held that brethren might do much good in their respective districts in the direction of guiding public opinion in opposition to the object which it was considered that the promoters of the Bill had in view. The motion was unanimously agreed to.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 7738 births and 4145 deaths were registered during the week ending June 6th. The annual rate of mortality in these towns, which had been 15·4, 15·5, and 14·9 per 1000 in the three preceding weeks, further declined last week to 14·3 per 1000. In London the death-rate was 13·8 per 1000, while in the 75 other large towns it averaged 14·6 per 1000. The lowest death-rates in these towns were 6·4 in Walthamstow, 6·9 in Reading, 7·1 in Burton-on-Trent, 8·0 in Hornsey, 8·2 in Willesden, 8·8 in Bristol, and 9·0 in Southampton; the highest rates were 19·9 in Liverpool, 20·6 in Bury, 21·0 in Wigan, 21·3 in South Shields, 22·0 in Warrington, 22·6 in Handsworth, 22·8 in Preston, 23·4 in Rochdale, and 29·1 in Middlesbrough. The 4145 deaths in these towns last week included 397 which were referred to the principal infectious diseases, against 428, 461, and 434 in the three preceding weeks; of these 4145 deaths 136 resulted from measles, 99 from whooping-cough, 66 from diarrhœa, 40 from scarlet fever, 38 from diphtheria, 12 from "fever" (principally enteric), and six from small-pox. In Hornsey, Southampton, Derby, Stockport, St. Helen's, Rochdale, Huddersfield, Halifax, York, and ten other smaller towns no death from any of these infectious diseases was registered last week; while they caused the highest death-rates in West Ham, East Ham, Great Yarmouth, Wolverhampton, Nottingham, Wigan, and Middlesbrough. The greatest proportional mortality from measles occurred in East Ham, Wolverhampton, Coventry, Nottingham, Wigan, Bolton, Sheffield, and Middlesbrough, and from whooping-cough in Croydon, Preston, Merthyr Tydfil, and Swansea. The mortality from each of the other principal infectious diseases showed no marked excess in any of the large towns. Two deaths from small-pox occurred in Manchester and one each in Liverpool, Bradford, Gateshead, and Cardiff, but not one in any other of the 76 large towns. The Metropolitan Asylums hospitals contained 72 small-pox patients at the end of last week, against 60, 64, and 60 at the end of the three preceding weeks; 24 new cases were admitted during the week, against seven, 19, and 10 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital which had risen from 1662 to 1771 at the end of the eight preceding weeks, had further increased to 1785 on June 6th; 210 new cases were admitted during the week, against 236, 234, and 225 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 225, 182, and 186 in the three preceding weeks, declined again to 171 last week and were 90 below the number in the corresponding period of last year. The causes of 56, or 1·4 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Leicester, Nottingham, Salford, and in 52 other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, St. Helen's, Warrington, Blackburn, Preston, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 18·0, 17·2, and 18·4 per 1000 in the three preceding weeks, declined again to 18·2 per 1000 during the week ending June 6th, but was 3·9 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 10·8 in Perth and 15·1 in Paisley to 18·8 in Greenock and 19·1 in Glasgow and in Edinburgh. The 596 deaths in these towns included 25 which were referred to whooping-cough, 18 to diarrhœa, nine to measles, seven to scarlet fever, four to diphtheria, and two to "fever," but not one to small-pox. In all, 65 deaths resulted from these principal infectious diseases last week, against 68, 51, and 70 in the three preceding weeks. These 65 deaths were equal to an annual rate of 2·0 per 1000, which was 0·6 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 25, 22, and 28 in the three preceding weeks, declined again last week to 25, of which 16 were occurred in Glasgow, five in Edinburgh, and three in Greenock. The deaths from diarrhœa, which had been 12, 16, and 18 in the three preceding weeks, were again 18 last week, and included six in Glasgow, six in Edinburgh, and five in Aberdeen. The fatal cases of measles, which had been six in each of the two preceding weeks, increased last week to nine, of which four were registered in Glasgow and four in Edinburgh. The deaths from scarlet fever, which had been one and six in the two preceding weeks, further rose to seven last week and included five in Glasgow. The fatal cases of diphtheria, which had been six, three, and five in the three preceding weeks, declined again last week to four, of which two were recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 101, 102, and 114 in the three preceding weeks, declined again to 111 last week, and were slightly below the number in the corresponding period of last year. The causes of 23, or nearly 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 22·3, 22·4, and 22·2 per 1000 in the three preceding weeks, rose again to 22·7 per 1000 during the week ending June 6th. During the past four weeks the death-rate has averaged 22·4 per 1000, the rates during the same period being 14·2 in London and 18·1 in Edinburgh. The 165 deaths of persons belonging to Dublin registered during the week under notice were four in excess of the number in the preceding week and included ten which were referred to the principal infectious diseases, against 15, 11, and seven in the three preceding weeks; of these three resulted from small-pox, three from "fever," two from measles, one from whooping-cough, and one from diarrhœa, but not one from scarlet fever or from diphtheria. These 10 deaths were equal to an annual rate of 1·4 per 1000, the death-rates last week from the same diseases being 1·5 in London and 2·5 in Edinburgh. The deaths from small-pox, which had been four, four, four, and none in the four preceding weeks, rose again last week to three.

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING MAY, 1903.

(*Specially compiled for* THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1903.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.											Deaths from all causes.	Death rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON...	4,613,812	53	1064	530	2	85	6	22	325	—	2137	6·0	1	244	33	48	136	—	15	—	73	550	1·6	5010	14·2	98
West Districts.																										
Paddington	146,032	2	30	18	—	2	—	—	6	—	58	5·2	—	5	1	2	6	—	1	—	2	17	1·5	149	13·3	98
Kensington	178 409	—	21	13	—	4	—	1	12	—	51	3·7	—	—	—	1	4	—	—	—	3	8	0·6	144	10·5	87
Hammersmith	115,803	2	32	11	—	1	—	—	15	—	61	6·9	—	2	1	—	2	—	—	—	5	10	1·1	124	14·0	160
Fulham	147,720	—	45	32	—	1	—	1	14	—	93	8·2	—	—	1	2	6	—	—	—	3	12	1·1	128	11·3	79
Chelsea	74,169	—	40	2	—	2	—	1	9	—	54	9·5	—	—	—	—	5	—	1	—	1	7	1·2	75	13·2	117
City of Westminster	179,052	—	28	18	—	3	1	2	8	—	60	4·4	—	3	—	2	—	—	2	—	2	9	0·7	188	13·5	110
North Districts.																										
St. Marylebone	131,234	—	50	22	—	2	—	1	12	—	87	8·6	—	2	3	5	3	—	1	—	2	16	1·6	156	15·5	68
Hampstead	85,197	—	8	6	—	1	—	—	1	—	16	2·4	—	1	1	—	2	—	—	—	—	4	0·6	64	9·8	49
St. Pancras	235,716	—	42	52	—	5	—	—	25	—	124	6·9	—	42	2	4	6	—	1	—	3	58	3·2	293	16·2	116
Islington	339,137	—	61	39	—	7	—	3	11	—	121	4·7	—	16	1	1	14	—	1	—	4	37	1·4	368	14·1	92
Stoke Newington	52,069	—	6	2	—	1	—	—	1	—	10	2·5	—	2	—	—	—	—	1	—	—	3	0·8	45	11·3	92
Hackney	224,082	3	61	32	—	3	—	1	25	—	125	7·3	—	18	2	1	6	—	1	—	2	30	1·7	245	14·3	108
Central Districts.																										
Holborn	57,845	—	14	6	—	2	—	—	6	—	28	6·3	—	2	2	3	1	—	—	—	2	10	2·3	73	16·5	111
Finsbury	99,717	—	15	11	—	1	—	1	8	—	36	4·7	—	11	2	1	5	—	—	—	2	21	2·7	146	19·1	83
City of London	24,539	—	11	1	—	—	—	—	—	—	12	6·4	—	—	—	—	2	—	—	—	—	2	1·1	27	14·3	300
East Districts.																										
Shoreditch	117,513	—	20	16	—	1	—	1	7	—	45	5·0	—	16	1	4	4	—	—	—	2	27	3·0	150	16·6	82
Bethnal Green	130,028	2	19	20	1	3	—	1	12	—	58	5·8	—	21	1	1	2	—	—	—	2	17	1·7	157	15·7	76
Stepney	302,153	1	48	30	—	7	—	—	30	—	116	5·0	—	11	2	3	3	—	—	—	8	27	1·2	332	14·3	79
Poplar	169,550	10	39	27	—	1	—	1	9	—	87	6·7	—	18	—	5	8	—	—	—	6	37	2·8	229	17·6	105
South Districts.																										
Southwark	207,369	3	52	30	—	4	—	2	12	—	103	6·5	—	13	1	1	9	—	—	—	5	29	1·8	299	18·8	149
Bermondsey	129,801	1	43	18	—	4	1	—	10	—	77	7·7	—	1	4	4	5	—	—	—	3	17	1·7	161	16·2	102
Lambeth	307,711	3	65	20	—	10	—	3	13	—	114	4·8	1	15	4	1	10	—	3	—	6	40	1·7	341	14·4	122
Battersea	173,422	17	33	17	—	1	—	—	7	—	75	5·6	—	31	—	2	6	—	—	—	1	40	3·0	221	16·6	143
Wandsworth	249 678	3	86	27	—	5	2	—	31	—	154	8·0	—	5	—	—	10	—	1	—	2	18	0·9	216	11·3	74
Camberwell	265,562	1	60	15	—	3	1	1	10	—	81	4·0	—	2	—	1	9	—	1	—	2	15	0·7	243	11·9	90
Deptford	112,537	—	43	34	1	2	1	—	6	—	87	10·1	—	2	1	1	2	—	—	—	2	8	0·9	104	12·0	89
Greenwich	99 824	2	13	15	—	1	—	1	4	—	36	4·7	—	3	1	2	3	—	—	—	—	9	1·2	94	12·3	112
Lewisham	138,405	—	45	28	—	2	—	1	12	—	88	8·2	—	4	—	1	—	—	1	—	2	8	0·8	112	10·7	66
Woolwich...	121 478	3	44	20	—	3	—	—	9	—	79	8·6	—	8	2	—	3	—	—	—	1	14	1·5	130	13·9	81
Port of London	—	—	—	—	—	3	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

The fatal cases of "fever," which had been one, two, and one in the three preceding weeks, increased to three last week. The deaths from measles, which had been five, one, and none in the three preceding weeks, rose again last week to two. The mortality from both whooping-cough and diarrhœa showed a decline from that recorded in the preceding week. Seven inquest cases and four deaths from violence were registered, and 69, or more than two-fifths of the deaths occurred in public institutions. The causes of ten, or more than 6 per cent., of the deaths registered in Dublin last week were not certified. The 165 deaths in Dublin last week included 27 of children under one year of age and 47 of persons aged upwards of 60 years; the deaths of infants showed a slight decline, while those of elderly persons were considerably in excess of the number in the preceding week.

VITAL STATISTICS OF LONDON DURING MAY, 1903.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 6·0 per 1000 of the population, estimated at 4,613,812 persons in the middle of the year. In the three preceding months the rates had been 6·2, 5·9, and 5·4 per 1000 respectively. The rates were considerably below the average in Kensington, the City of Westminster, Hampstead, Stoke Newington, and Camberwell; while they showed the largest excess in Fulham, Chelsea, St. Marylebone, Deptford, Lewisham, and Woolwich. The prevalence of small-pox showed a slight increase over that recorded in the preceding month; of the 53 cases notified during May, 17 belonged to Battersea, ten to Poplar, and three each to Hackney, Southwark, Lambeth, Wandsworth, and Woolwich. The Metropolitan Asylums hospitals contained 60 small-pox patients at the end of last month, against five, 13, and 47 at the end of the three preceding months; the weekly admissions averaged 13 last month, against three, three, and 12 in the three preceding months. The prevalence of scarlet fever was slightly in excess of that recorded in any previous month of this year; among the various metropolitan boroughs this disease was proportionally most prevalent in Chelsea, St. Marylebone, City of London, Wandsworth, Deptford, Lewisham, and Woolwich. The number of scarlet fever patients in the Metropolitan Asylums hospitals, which had been 1820, 1704, and 1685 at the end of the three preceding months, had risen again to 1738 at the end of May; the weekly admissions averaged 226, against 205, 208, and 201 in the three preceding months. Diphtheria was slightly more prevalent during the month under notice than in the preceding month; the greatest proportional prevalence of this disease occurred in Fulham, St. Marylebone, St. Pancras, Poplar, Deptford, Lewisham, and Woolwich. There were 808 cases of diphtheria under treatment in the Metropolitan Asylums hospitals at the end of last month, against 1030, 903, and 760 at the end of the three preceding months; the weekly admissions averaged 120, against 152, 126, and 105 in the three preceding months. The prevalence of enteric fever showed a marked increase last month as compared with the preceding month; among the various metropolitan boroughs this disease was proportionally most prevalent in Kensington, Chelsea, Holborn, Lambeth, and Bermondsey. The number of enteric fever patients under treatment in the Metropolitan Asylums hospitals, which had been 125, 92, and 53 at the end of the three preceding months, had further declined to 51 at the end of last month; the weekly admissions averaged 10 last month, against 13, 15, and five in the three preceding months. Erysipelas was proportionally most prevalent in Hammersmith, Chelsea, St. Pancras, Hackney, Holborn, and Camberwell. The 22 cases of puerperal fever notified during the month included three in Islington, three in Lambeth, two in the City of Westminster, and two in Southwark.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in public institutions having been distributed among the boroughs in which the deceased persons had previously resided. During the four weeks ending May 30th the deaths of 5010 persons belonging to London were registered, equal to an annual rate of 14·2 per 1000, against 16·5, 15·9, and 15·8 per 1000 respectively in the three preceding months. The lowest death-rates last month in the several metropolitan boroughs were 9·8 in Hampstead, 10·5 in Kensington, 10·7 in Lewisham, and 11·3 in Fulham, in Stoke Newington, and in Wandsworth; while the highest rates were 16·5 in Holborn, 16·6 in Shoreditch and in Battersea, 17·6 in Poplar, 18·8 in Southwark, and 19·1 in Finsbury. The 5010 deaths from all causes included 550 which were referred to the principal infectious diseases; of these, one resulted from small-pox, 244 from measles, 33 from scarlet fever, 48 from diphtheria, 136 from whooping-cough, 15 from enteric fever, and 73 from diarrhœa. The lowest death-rates from these infectious diseases last month were recorded in Kensington, City of Westminster, Hampstead, Stoke Newington, Camberwell, and Lewisham; and the highest rates in St. Pancras, Holborn, Finsbury, Shoreditch, Poplar, and Battersea. The 244 deaths from measles were 23 below the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in St. Pancras, Hackney, Finsbury, Shoreditch, Bethnal Green, Poplar, and Battersea. The 33 fatal cases of scarlet fever showed a decline of 21 from the average number in the corresponding periods of the ten preceding years; the greatest proportional mortality from this disease occurred in St. Marylebone, Holborn, Finsbury, Bermondsey, and Woolwich. The 48 deaths from diphtheria were only one third of the corrected average number; this disease was proportionally most fatal in St. Marylebone, St. Pancras, Holborn, Shoreditch, Poplar, and Bermondsey. The 136 fatal cases of whooping-cough showed a decline of 68 from the average number in the corresponding periods of the ten preceding years; among the various metropolitan boroughs the greatest proportional mortality from this disease was recorded in Paddington, Fulham, Chelsea, Islington, Finsbury, Poplar, and Southwark. The 15 deaths from enteric fever were 14 below the corrected average number; this disease showed the highest proportional fatality in Chelsea, City of Westminster, Stoke Newington, and Lambeth. The 73 fatal cases of diarrhœa were 14 in excess of the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in Hammersmith, Holborn, Stepney, Poplar, and Bermondsey. In conclusion, it may be stated that the aggregate mortality in London last month from these principal infectious diseases was nearly 19 per cent. below the average.

Infant mortality in London during May, measured by the proportion of deaths among children under one year of age to registered births, was equal to 98 per 1000. The lowest rates of infant mortality were recorded in Fulham, St. Marylebone, Hampstead, Bethnal Green, Stepney, Wandsworth, and Lewisham, and the highest rates in Hammersmith, Chelsea, the City of London, Southwark, Lambeth, and Battersea.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following Staff Surgeons have been promoted for conspicuous professional merit to the rank of Fleet Surgeon in His Majesty's Fleet:—Edward Bridges Townsend and Patrick Brodie Handyside. Dated May 30th, 1903.

The following appointments are notified:—Surgeons: W. E. Ruttledge to the *Robin*, C. A. G. Phipps to the *Edgar*, R. W. B. Hall to the *Bramble*, and W. W. Keir to the *Britomart*.

ROYAL ARMY MEDICAL CORPS.

Major F. S. Heuston, C.M.G., is seconded whilst holding the position of Physician and Surgeon to the Royal Hospital, Kilmainham. Dated Oct. 1st, 1902. Lieutenant-Colonel A. W. P. Inman, from the seconded list, to be Lieutenant-Colonel. Dated Oct. 1st, 1902. Lieutenant-Colonel J. A. Gormley is placed on retired pay. Dated June 3rd, 1903.

IMPERIAL YEOMANRY.

Staffordshire (Queen's Own Royal Regiment): Surgeon-Captain E. W. Welchman to be Surgeon-Major. Dated June 6th, 1903.

Volunteer Corps.

Royal Garrison Artillery (Volunteers): 4th West Riding of Yorkshire: Surgeon Lieutenant A. W. Cuff to be Surgeon-Captain. Dated May 9th, 1903.

Rifle: 1st Volunteer Battalion the Royal Warwickshire Regiment: Surgeon-Captain R. A. Newton to be Surgeon-Major. Dated June 6th, 1903. 4th Volunteer Battalion the South Wales Borderers: William Percival Miles to be Surgeon-Lieutenant. Dated June 6th, 1903. 3rd Volunteer Battalion the Gloucestershire Regiment: Surgeon-Lieutenant T. M. Carter resigns his commission and is appointed Lieutenant. Dated June 6th, 1903 3rd Volunteer Battalion the Duke of Wellington's (West Riding Regiment): Surgeon-Lieutenant A. Waugh resigns his commission. Dated June 6th, 1903. 1st Volunteer Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiment): Surgeon-Lieutenant E. V. Eames to be Surgeon-Captain. Dated June 6th, 1903 1st Volunteer Battalion the Loyal North Lancashire Regiment: Surgeon-Lieutenant J. Lea resigns his commission. Dated June 6th, 1903.

Mentioned in Despatches: the Darwesh Khel Waziris Operations.

In a despatch from Major-General Sir C. C. Egerton, K.C.B., D.S.O., published in the *London Gazette* of June 5th and dated May 28th, the name of Colonel J. T. B. Bookey, C.B., I.M.S., is mentioned, "to whose power of organisation is due the success of the medical arrangements for the force."

The Annual Dinner of the Royal Army Medical Corps Militia.

This dinner was held on June 8th in the Alexandra Hall of the *Trocadéro* Restaurant, Piccadilly-circus, London, W. The chair was taken by Sir Frederick Treves, Bart., K.C.V.O., C.B., and among the guests entertained by Colonel Sir J. R. A. Clark, Bart., C.B., and the officers of the Royal Army Medical Corps Militia were Major-General Sir W. Gatacre, Sir John Furley, Sir William Taylor, K.C.B. (the Director-General of the Army Medical Service), Major-General Sir A. Turner, K.C.B., Lieutenant-Colonel W. Babtie, V.C., C.M.G., R.A.M.C., and Surgeon-General A. H. Keogh, C.B., R.A.M.C. The toast of "The Services" was proposed by Sir J. R. A. Clark, who said they were all confident that the services would work together with that unanimity and single-heartedness of purpose for the welfare of the empire which could alone secure success. Major-General Sir W. Gatacre, in reply, said that the combatant forces could not take their part in the work allotted to them without the help of the medical services. They had a valuable body in the Royal Army Medical Corps Militia and they all hoped that that branch would increase and multiply and always attract the best men to its ranks. Major-General Sir A. Turner, who also replied to the toast, said that in regard to the auxiliary forces the nation must depend on voluntary efforts and the late war had shown that they could depend on the auxiliary forces with confidence. He looked on the Army Medical Department as equal in importance to any department, for it contended in the field with disease which claimed far more victims than the sword or bullet and last, but not least, it alleviated suffering and secured the means of health. Sir William Taylor also acknowledged the toast and congratulated the Royal Army Medical Corps Militia on the promotion of Sir J. R. A. Clark to his full rank as colonel. Major Moyle O'Connor, R.A.M.C. (Militia) then proposed "The Guests" and said that it would encourage men to join the Royal Army Medical Corps Militia when the fact was known that it had been stated by Sir William Taylor and by Mr. Brodrick that they were to have a preferential claim when officers of the Royal Army Medical Corps were not available for any particular service. That would be a good point to put before candidates for the Royal Army Medical Corps Militia. The toast was replied to by Major-General W. S. Oliphant who complimented his hosts on the keenness and ability with which they did their duty. Sir John Furley also responded.

The Question of the Infected Army Blankets.

While no one would hold Mr. Brodrick, or the department over which he presides, as in any way directly responsible in the matter of the infected army blankets it must be admitted that he was placed in a very disagreeable and awkward position in having to explain what he did not seek to justify—namely, the blundering and reprehensible course which had been adopted by the authorities at Cape Town. Apart even from the regulations which exist on the subject and the instructions which had been expressly issued from the War Office in regard to the method of dealing with the infected bedding and stores in South Africa, we should have thought that common sense and prudence would have suggested that something more than ordinary care was required in dealing with enormous "stacks" of soiled and infected blankets. Admitting that the conditions set forth by Mr. Brodrick were of a pressing and exceptional character they really afford no justification for what was done and it is very unsatisfactory to the British public to be merely told that "the military authorities are considering the matter." In view of rendering any such occurrence as that which took place in South Africa impossible in future it seems to us that the War Office might go further than it has done. It should insist upon the thorough disinfection of all infected and soiled blankets and other articles as an invariable practice (where they are not ordered to be burned) and [illegible] bit the sale or other dis- [illegible] It will be remembered [illegible] exhaustive inquiry instituted [illegible] ment into the causes of "the [illegible] volunteer camps of the Unite [illegible] only was there direct infection from man to man, but the indirect infection from contaminated clothing, bedding, and tentage was very forcibly dwelt upon and worked out in connexion with what the American commission called "company epidemics."

The Dinner of the South African Civil Surgeons.

Sir William Thomson, C.B., presided over this dinner which was held on June 5th at the Hotel Cecil. Mr. Clinton T. Dent, in proposing the toast of "The Imperial Forces," observed that "Tommy Atkins" in the South African war had by his cheery good humour and dogged endurance made himself everyone's friend. Referring to the soldier's remarkable propensity for recovery from the severest operations of every kind he said that this quality endeared him to the gentlemen who had to submit him to such inconvenience. The Imperial forces included men of every creed and colour knit into close union in the time of war but apt to become a little loosely divided in time of peace. To render the union more permanent was a matter for the practical politician. It had to be recognised that in time of national trouble it would be absolutely necessary to call on civil help to aid the military forces and it seemed to him that it was a pity that no attempt was made to organise in time of peace the civil medical community so that help could be afforded in time of need. Surgeon-General A. H. Keogh, C.B., R.A.M.C., replied to the toast and said that he was glad that the civil portion of the medical community had recognised its duty to the army in time of war because in future campaigns of any magnitude the civil medical element would undoubtedly have to be relied upon. The civil medical profession should therefore be organised in time of peace in order that it should be able to render efficient aid when necessary. The company separated after the chairman's health had been proposed by Mr. G. H. Makins, C.B., and suitably acknowledged.

The residential part of the Royal Army Medical College has been removed from the Hotel Belgravia to St. Ermin's Hotel, Westminster.

Correspondence.

"Audi alteram partem."

ASEPTIC AND ANTISEPTIC SURGERY.

To the Editors of THE LANCET.

SIRS,—Surely Mr. W. Watson Cheyne's remarks in his paper read before the Harveian Society were not meant to lead to a criticism of the general practitioner. He referred to the surgeons who practise aseptic as distinguished from antiseptic surgery. I must most strongly protest against Mr. F. Deane's endeavour to belittle the "general practitioner" and to dictate to him what he should do.[1] Surely a general practitioner, more especially the younger members, after being schooled in the practice of antiseptic surgery, can often be as sure of obtaining primary union as the consultant and that without stitch abscesses. I myself do all my own operations and carrying out the precautions and directions given in Lockwood's "Aseptic Surgery" have obtained primary union in all cases—e.g., removal of adenoma from the breast, radical cure of hydrocele and hernia, removal of tuberculous glands in the neck, removal of dermoids over the eye, &c. What more could any surgeon obtain? This belittling of the general practitioner leads to such a state of affairs as the following. A general practitioner is called to see a patient who has fractured the greater tuberosity of the humerus. The general practitioner informs his patient that his arm is broken and the patient at once says that he must have the best man down from London. A consultant comes down, the patient has an anæsthetic, his arm is examined, and the diagnosis is confirmed. Of course, the result is that much more effusion is thrown out which has to be got rid of by massage, &c., and the consultant pockets a fee of 10, 20, or more guineas, practically for doing what was absolutely unnecessary and yet never sees the patient again. All the hard work and important massage, &c., have to be done by the general practitioner with the result of a good useful arm.

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[1] THE LANCET, May 30th, 1903, p. 1543.

Surely, if a general practitioner is enthusiastic over surgery and will take endless pains to get all his instruments, dressings, sutures, &c., absolutely sterile and can be absolutely sure of primary union, why should he not attempt it? There are so many people who cannot afford a consultant's fee for operation and yet do not care to go into a hospital. Why should not the general practitioner take a smaller fee and give the patient as much satisfaction as if the operation were done in a hospital? The whole crux of the question, aseptic *v.* antiseptic surgery, is this, You cannot possibly do without using antiseptics and the best results, whether in hospital or private practice, are obtained by combination of both heat and chemicals as mentioned by both Mr. Watson Cheyne and Mr. C. B. Lockwood.

I am, Sirs, yours faithfully,

London, June 3rd, 1903. ROBERT HENDERSON.

SPITTING IN PUBLIC-HOUSES.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 16th, p. 1401, Dr. Sidney Davies refers to public-houses as being fruitful sources of phthisis. Allow me to emphasise his remarks by drawing attention to another aspect of the same subject. There is a widely spread custom, especially in old inns, of using spittoons containing sand, sawdust, malt-dust, &c., which are dealt with in ways more or less insanitary. A few days ago while cycling I experienced an object lesson not easily forgotten. Outside a charming old inn was arranged a row of wooden spittoons. These, with their filthy contents, were placed on benches in the sun to dry and after a superficial sprinkling of sawdust were replaced in the bar, &c. Such a condition is doubtless the result of ignorance and very simple measures need be taken to correct such misuse of the spittoon method of dealing with expectoration.

I am, Sirs, yours faithfully,

Devonshire street, W., June 4th, 1903. WYATT WINGRAVE.

THE DIRTY FOUNTAINS IN TRAFALGAR-SQUARE.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to say a few words on this from the point of view of the design of such spaces in cities? For years I have seen these huge and ugly basins with regret and put down to our British toleration of ugliness that the most used of any open space in London should be so degraded. Apart from the filth of the water the square is wholly wrong from the point of view of good and simple design. If we are to have such breathing spaces in crowded cities surely it is only plain reason to ask that they be not merely to add to the areas of asphalte and stony surfaces with which we are already amply supplied? The mistaken idea of these huge fountain basins is taken from cities like Rome with a long and hot summer. Fresh and delicious water coming from the hills and tumbling into the hot places of Rome, supplying the people with water and cooling the hot streets, was a necessity, and Roman artists made their fountains worthy of their great use and of the city of Rome. But in our cool and moist country there is no need, artistic or other, for the introduction of huge water-basins of this character and we may see the hideous result in other places as well as Trafalgar-square—for example, the head of the Serpentine.

On the other hand, we have evidence, both in London and other cities, that such small places may be fresh and beautiful, even in the smoke. There is surely enough work for our architects to rebuild our houses and cities without despoiling open spaces which with a little thought and care might add to the beauty of the town. Even their own true work suffers as such "architectural gardening," as it is called, offers no relief to buildings as even poorly planted squares do. The spaces about Trafalgar-square are so wide and airy that there is not the slightest occasion to leave a wide spread of asphalte towards the middle. There might be two lines of trees on the upper terrace and the tramps who now defile the whole place should be kept to that or some other fixed place and not occupy, as they do, the best place in the square. The warm side would be a happy place to grow the flowers that in our climate enjoy and need the sun. Even without any great change of plan the great basins would form noble flower-beds, but the best and most dignified way would be to make a clearance of the whole central block of asphalte, &c., and plant trees and shrubs. Let anyone who looks at this square in its present state go and look at some of the smaller squares in the West Central district and then compare the effect. The gardening in the squares of London is the worst of any city in Europe—men digging and muddling about overgrown privet and like rubbish—yet the trees save the situation as they would Trafalgar-square. The effect need not be in any doubt, because we have plenty of evidence already that trees that thrive in London may adorn such places.—I am, Sirs, yours faithfully,

Lincoln's Inn-fields, June 8th, 1903. W. ROBINSON.

THE USE OF THE SINGLE CUP AT THE CELEBRATION OF HOLY COMMUNION.

To the Editors of THE LANCET.

SIRS,—In view of the interest which this subject is awakening and for purposes of information in a forthcoming local discussion on the subject I should be glad if any of your readers who have been able to trace the spread of disease to the promiscuous use of one cup at the celebration of Holy Communion would kindly place a record of their experience at the disposal of the public. I venture to think that there is a strong *primâ-facie* case against the use of one cup, but the task of the hygienic innovator would be made much easier if he could cite actual examples of contagion.

I am, Sirs, yours faithfully,

Rochdale, June 9th, 1903. J. H. BRITTAIN.

PENAL CASES AT THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—Reading the report of the meeting of the General Medical Council in THE LANCET of last week I notice that at least two of the cases before the Council of charges of infamous conduct were adjudged not proven against the supposed offenders and the President, in delivering judgment did not even caution these gentlemen, so that one may assume that the charges completely fell to the ground. I do not know precisely who or what person or body in either case was answerable for these gentlemen appearing before the Council, but it is quite evident that some person or persons outside of the Council must have laid these charges for the Council to adjudicate upon and that each of these practitioners must have been put to considerable expense to refute them, that they must have suffered great mental worry and been caused much trouble. There will be also in the minds of a great many a stigma attached to the names of these gentlemen which it will take some time to efface.

I want to ask, therefore, in the interests of the whole profession, if either, or both of these gentlemen, having been declared innocent of the charges made against them, has any redress? Can they ascertain who was responsible for the prosecution (or shall I say persecution?) and go for damages in the civil court for defamation of character? It is evident that if charges can be made to the Council by any irresponsible person no member of the profession is safe. I am sorry to take up your valuable space but I think that this is a matter of great importance in the light of your report of the meeting of the Council last week.

I am, Sirs, yours faithfully,
THOMAS MARSHALL, L.R.C.P. & S. Edin.,
London, June 1st, 1903. L.F.P. & S. Glasg.

*** Our correspondent raises a most important question and one upon which no off-hand opinion can be expressed. He is wrong, surely, in believing that a practitioner accused before the General Medical Council of professional offences remains in ignorance of the name of his accuser.—ED. L.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Physical Unfitness of Volunteers in India.—The Plague Epidemic.—Nursing Arrangements at the Jamsetjee Jeejeebhoy Hospital.

THE physical defects which would incapacitate so many of the volunteers at home from active service appear to be still more marked among the volunteers in India. The 800 unmounted volunteers who were at the Delhi durbar afforded to Surgeon-Lieutenant-Colonel J. S. Brooke an opportunity of showing in his report various particulars of the general physical condition of the men under his charge. In all 333 men came on sick parade—a very large proportion out of 800 considering the short time during which they were on duty and the fact that their work was almost entirely ceremonial. 14 were sent home as totally unfit for any service. Surgeon-Lieutenant-Colonel Brooke says that the extremel [illegible] volunteers confirms him in [illegible] lunteers should be medically examined before being enrolled. He has no hesitation in saying that on field service fully 35 per cent. of the men at Delhi would have been useless. In this connexion [illegible] red that the volunteers [illegible] n of mixed blood—in [illegible] ıe corps there is very [illegible] the natives, and even that in many cases typical natives have been admitted. This is a serious question, because the volunteers in India are more likely to be called upon for duty than are those at home and physical unfitness in so large a proportion would cause us to live (if the volunteers here are to be of any use) in a fool's paradise. There are very few corps solely composed of men of pure British blood and these are the few crack corps in the country.

The mortality returns for Bombay city are now rapidly returning to a more normal standard. The deaths from plague have rapidly declined in number during the past few weeks, [illegible] these fluctuating records are the fruit of inaccurate registration. Plague seems, as it were, to leave Bombay by the north of the island as, while declining in the city, it attacks the villages to the north very severely. The epidemic of plague throughout India has been the subject of some general influence. The outbreaks in various places have declined rapidly during the past few weeks and although Karachi is still badly affected, as are some parts of the Punjab, the disease is everywhere else subsiding. Very little inoculation work is being done for plague, still less for cholera, and that for typhoid fever is now, for the army at any rate, prohibited.

I reported to [illegible] state of the nursing [illegible] and adjoining h[illegible] wards of the Jamsetjee Jeejeebhoy Hospital, which were nearly always full, were the patients nursed at all, the remainder being left to the tender mercies of ward boys and ayahs. Mr. and Mrs. Crowe took up the task of improving this condition of things and a large sum of money has been collected. The nursing fund will now with Government help be very little short of its requirements, but the nurses' quarters being very badly wanted Mrs. Wadia (a wealthy Parsee lady) has undertaken to build them. A serious reproach to the present generation of Bombay citizens has thus been completely removed.

May 23rd.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The General Hospital: Endowment of a Bed by a Football Club.

THE famous Aston Villa Football Club is well known to all persons taking any interest in a sport which attracts the attention of so many during a large portion of each year. It will, however, be news to most that, in addition to taking a high place in the world of athletics, this club gives considerable sums in aid of charities of various kinds, the sum actually contributed during the past 11 years amounting to about £20,000. The last exhibition of its generosity took place on June 5th, when a cheque for £1250 was handed over to the committee of the General Hospital for the permanent endowment of a bed in the accident ward of that hospital. The history of the raising of this sum is of interest. In 1899 Mr. Margoschis, who had long been one of the directors of the club, retired from that position and in order to mark its sense of the services which he had rendered it was decided to present him with a sum of £100. Mr. Margoschis, instead of accepting the gift for himself, expressed a wish that it should form the nucleus of a fund to be raised permanently to endow a bed in the hospital. The result of many efforts during the past four years has been that the sum has now been raised and a deputation from the club was present at the meeting of the committee of the hospital held last week when a cheque, as above stated, was handed to Mr. Hugh Smith, the chairman of the committee, by Mr. Margoschis himself.

Education Committee.

In a previous letter I mentioned that the education committee had advertised for a superintendent of special schools who might either be a medical woman or a person with special knowledge of this particular class of schools and I expressed the hope that a member of the medical profession might be selected for this post. At the last meeting of the committee this hope was realised by the appointment of Miss Caroline E. O'Connor, M.B., Ch.B. Edin., at a commencing salary of £150 per annum. In proposing her election, Mrs. Pinsent, who is chairman of the subcommittee charged with the care of these schools, said that a few years ago it was supposed that there were comparatively few children in Birmingham who could be regarded as mentally deficient. Inquiries, however, revealed the fact that there were many mentally defective children in the schools whose presence therein had not been generally known. It was estimated that whilst there were between 8000 and 9000 such children in London there were between 800 and 900 in Birmingham. At the end of April, 1902, only 118 were on the register of special classes in this city and it became apparent to the late school board that every effort must be made to trace out the children of this class who were in the ordinary schools. The duties of superintendent were undertaken by the members of the committee but it soon became evident that a special officer must be appointed to take charge of this work; hence the appointment which has just been made. Dr. O'Connor was for some time medical officer of Eday, one of the Orkney islands.

Health of Birmingham during 1902.

The last report—that for the year 1902—which the present medical officer of health, Dr. Alfred Hill, will issue has recently been made public. From this it appears that the death-rate during the past year is the lowest that has ever been recorded in Birmingham and that, as regards the sanitary condition of the city, considerable advance has been made in different dir[illegible] The estimated population of the city was 528,521 a[illegible] ses was about 110,500. The [illegible] r were equal to a birth-rate [illegible] ılation. This is a very low figure, in fact, only once—viz., in 1894, when the birth-rate fell to 31·6—has such a small ratio been recorded. The number of marriages registered was 5120, equal to a rate of 19·1 per 1000. The death-rate was 18·0, this being 2·2 per 1000 below the average of the past ten years. If the rate had been the same as the average of the past ten years—20·2 per 1000—there would have been 10,844 deaths, whereas the actual number was 9672, a saving of 1172 lives. Dr. Hill calls attention to the great mortality amongst infants which he states is more than ten times as great as that of the population as a whole. Last year, however, the infantile mortality of Birmingham was unusually low, being at the rate of 157 infant deaths per 1000 births, against an average of 189 in the previous ten years. The deaths from the seven principal zymotic diseases numbered 1397, equivalent to a death-rate of 2·6 per 1000. The deaths were thus divided: diarrhœa, 412; scarlet fever, 293; whooping-cough, 269; measles, 189; diphtheria, 130; enteric fever, 100; and small pox, 4. There were notified during the year 5044 cases of scarlet fever, 787 of diphtheria, 544 of enteric fever, 69 of small-pox, and 1548 of chicken-pox. Dr. Hill calls special attention to the value of vaccination and revaccination and insists that it is only since vaccination became more general that small-pox has taken the mild and not very fatal form with which we are now acquainted. The number of cases of scarlet fever was far greater than in any other year since compulsory notification was introduced. The deaths, however, were not very numerous, amounting only to 5·8 per cent. of the cases. During the year there was an increase in the number of cases of diphtheria from 533 to 787 and there were 130 deaths as compared with 85 in the former year. Dr. Hill thinks that the increase in this particular kind of disease is in some way connected with the great prevalence of scarlet fever. From consumption there were 874 deaths and from other forms of tuberculosis there were 219, giving, for cases of consumption, a death rate of 1·63 per 1000. The death-rates, as on previous occasions, show that consumption is principally a disease of the less sanitary portions of the city, where both the hygienic and social conditions are of an inferior character. The number of houses declared to be unfit for human habitation by the medical officer during the year was 450 and all these are being dealt with by the health committee. The report also contains a statement of the number of cases in which sanitary improvements were insisted upon and carried out during the year.

June 9th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The New University of Liverpool.

THE clerk of the Privy Council has issued the draft charter incorporating the University of Liverpool. One of the conditions of the constitution of the University is that there shall be no religious tests imposed on either teachers or students and that no theological teaching shall be given by, or under the authority of, the University. Colleges and institutions in which theological teaching is given may, however, be recognised by affiliation. Women are to be eligible for any office in the University and for membership of any of its constituent bodies, and all degrees and courses of study in the University are to be open to women, subject to such conditions and regulations as the statutes of the University may prescribe. The court will include, in addition to members of the University, five persons appointed by the city council, one by the House of Keys of the Isle of Man, two by the county council of Lancashire, one each by the counties of Cheshire, Cumberland, Shropshire, and Westmorland, one each by the boroughs of Barrow-in-Furness, Birkenhead, Bootle, Chester, Crewe, Lancaster, Leigh, Preston, St. Helen's, Southport, Warrington Widnes, and Wigan, and one by the district councils of Runcorn and Wallasey, the Members of Parliament for Liverpool and Birkenhead, and not less than ten Members of Parliament for the boroughs and divisions of counties or boroughs in the counties of Lancaster and Cheshire to be nominated by the court, the Governor of the Isle of Man, the Lords Lieutenant of the counties of Lancaster and Cheshire, the Lord Mayor of Liverpool, the chairmen of the Lancashire and Cheshire county councils, the Vice-Chancellor of the Duchy of Lancaster, the Bishops of Liverpool, Chester, and Sodor and Man, the Roman Catholic Bishops of Liverpool and Shrewsbury, and representatives of the Presbyterian Church of England, of the Congregational Union, of the Wesleyan Methodist Church, of the Baptist Church, of the Presbyterian and Unitarian ministers, and various officials of public bodies in Liverpool, Lancashire, and Cheshire; also representatives of various educational institutions in these districts. The court will be the supreme governing body of the University but the executive will be a council; there will also be a senate which, subject to the control of the council, will regulate and superintend the education and discipline of the University. The senate is to consist of the vice-chancellor, the deans of all the faculties, all the professors of the University, and the librarian. Principal Dale of University College is nominated as the first vice-chancellor.

The Gradual Subsidence of Small-pox in Liverpool.

At the meeting of the health committee held on June 4th Dr. E. W. Hope, the medical officer of health, reported that 33 fresh cases of small-pox had been notified during the past week, as against 49 during the previous week. There were 198 cases in hospital, compared with 231 and 253 in the previous two weeks. The cases in hospital had decreased from 335 on March 19th to 198 on June 4th. There had been four deaths from small-pox during the week.

University College, Liverpool: New Lectureships.

The council of University College, Liverpool, has made the following appointments to lectureships in the faculty of medicine: Specific diseases, Dr. A. Bernard; experimental medicine, Dr. A. S. F. Grunbaum; and comparative pathology, Dr. H. E. Annett.

Meeting of the Anatomical Society in Liverpool.

The Anatomical Society will hold its summer meeting at University College, Liverpool, on June 19th and 20th. The programme is an interesting one and includes meetings for the exhibition of specimens and the reading of papers. Dr A. N. Walker is the local secretary of the society. The society's dinner will take place at the Adelphi Hotel on June 19th. The Manchester Edinburgh University Club has taken advantage of the meeting of the Anatomical Society at Liverpool to invite Sir William Turner and Professor D. J. Cunningham to a complimentary dinner at the Adelphi Hotel on June 18th. All Edinburgh graduates are invited to be present and may bring guests. Tickets (10*s* 6*d*. each, exclusive of wine) may be obtained from the local secretary, Dr. R. C. Dun, 6, Rodney-street, Liverpool.

The Health of Bootle: Mr. T. W. N. Barlow's Annual Report.

Mr. Barlow (the medical officer of health of Bootle) in his annual report for 1902 emphasises the protection afforded by vaccination and revaccination against small-pox. During the year there were 15 distinct outbreaks of small-pox—25 cases in all. Not one of the patients had been revaccinated and seven had never been vaccinated. There were four deaths and with the exception of one woman, aged 45 years, all were among the unvaccinated class. A further proof of the value of revaccination is afforded by the fact that while several of the nurses and ward-maids during the year had been attacked with scarlet fever, two with typhoid fever, one with diphtheria, and one with typhus fever, not one of the staff had contracted small-pox. All had been living under the same conditions and had been exposed to the same danger of contracting this disease as the others, but revaccination was insisted upon for every member of the hospital staff, with the result that not one had contracted the disease. Dr. Hope's experience at the Liverpool Small-pox Hospital coincides with that of Mr. Barlow, and it is inconceivable how the anti-vaccinationists can ignore such remarkable facts. The birth-rate of Bootle for 1902 is the highest recorded for six years. The death-rate was 18 9 per 1000 of the population. The zymotic death-rate was 2 7 per 1000. 46 children had died from measles; 14 had died from scarlet fever out of 321 cases notified. Infantile mortality, although still high, shows a gratifying decline, as also does the number of deaths from summer diarrhœa. The appointment of a veterinary inspector to inspect periodically the cattle in shippons has been attended by distinctly beneficial results. The health committee has agreed to Mr. Barlow's recommendation to remove the small-pox hospital to an isolated place further in the country.

June 9th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Monmouthshire Western Valley Sewer.

THERE appears to be at last some prospect of a trunk sewer being constructed for the drainage of those rapidly increasing colliery districts which now pollute the river Ebbw. A committee of the House of Commons has found proved the preamble of a Bill which provides for the construction within the next seven years of a sewer discharging into the Bristol Channel near Newport. The localities concerned are the urban districts of Ebbw Vale, Nantyglo and Blaina, Abertillery, Abercarn, and Risca which have a combined area of 31,000 acres, a population of 81,000, and a rateable value of £266,000. The population in 1891 was 69,000. The estimated cost of the sewer is £237,000. A great deal of contradictory evidence was given before the committee with regard to the relative advantages of a joint trunk sewer and of separate bacterial schemes. The advocates of the latter insisted that a main trunk was not at all suitable for a mining district where subsidences so often take place, but in opposition to this view evidence of the stability of the Rhondda sewer was tendered showing that this main trunk, which is 17½ miles long and cost £156,000 to construct, has quite fulfilled the expectations of its designers since it was completed in 1893.

Merthyr Tydfil Union Infirmary.

The board of guardians of the Merthyr Tydfil Union is very desirous of continuing the workhouse infirmary as a training school for nurses and the medical officer (Mr. J. L. W. Ward) has recently reported to the Local Government Board in some detail pointing out that the infirmary contains all the essentials of a training school, as set out in the report of the departmental committee on workhouse nursing, except that there is no resident medical officer—an omission which is practically met by the fact that he lives within a few minutes' walk of the institution and is in direct telephonic communication with every block and charge nurse The building is well equipped as a modern hospital, with an excellent operating theatre, and there is an x-ray apparatus for diagnostic and other purposes. During last year nearly 1200 patients were under treatment in the infirmary.

Vaccination of Vagrants.

In February of the present year the Leominster board of guardians instructed the medical officer of the workhouse to vaccinate all vagrants who were willing to undergo the operation and nearly 450 persons have thus been vaccinated. In view of the near approach of the hop-picking season, when several thousand men, women, and children come into Herefordshire from Staffordshire and South Wales, it is to be regretted that the board should have decided to rescind the resolution which it adopted in February. The reason given by the chairman of the board for taking this retrograde step is that it was anticipated that tramps would be kept away from the union, whereas there has actually been no diminution in the number seeking admission to the casual wards. It is only fair to state that all the members of the board are not in agreement with the chairman and one guardian pointed out that the single case of small-pox which had occurred this year among the tramps who visited the Leominster workhouse had cost the board £40.

Chippenham Cottage Hospital.

Although the Chippenham Cottage Hospital was established as recently as 1899 with eight beds it has already been found necessary to increase the accommodation and on June 2nd Lady Dickson-Poynder formally opened a new wing which includes a ward with a nurses' duty room and bedroom and a bath-room. The cost of these additions, including the furnishing, is £750 and nearly the whole of this sum has already been raised.

An Isolation Hospital in the Gower Peninsula.

Isolation hospitals are being gradually provided throughout Glamorganshire in response to pressure brought to bear by the county council. From the Gower rural district, where there is a decreasing population of about 7000 persons, small-pox patients have hitherto been received into the Swansea Hospital and the district council has persistently refused to establish an isolation hospital within its own area. The sanitary committee of the county council has therefore decided to make a compulsory order for the erection of a hospital.

Western Counties Asylum, Starcross.

The annual meeting of the subscribers to the Western Counties Asylum for the Treatment of the Feeble-minded was held at Starcross, Devon, on May 30th. The financial statement showed that the total income, including a favourable balance of £1070 brought forward from 1901, was £9229. The total expenditure was £8701 and a favourable balance of £528 remained. The medical report stated that during 1902 the average number of patients was 270, the health of the inmates had been good, and only one death had occurred. There had been an increase in the average cost of maintenance, which was 10*s.* 2*d.* per head, against 9*s.* 7d. in 1901. In these circumstances the committee has decided to raise the charge for cases from the four western counties from 9*s.* to 10*s.* 6*d.* weekly and for those from other counties to 14*s.* weekly.

June 9th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The University of Dublin.

THE Senate of the University of Dublin decided on June 9th to admit women to its degrees.

Royal College of Surgeons in Ireland.

A meeting of the Fellows of the Royal College of Surgeons in Ireland was held on May 30th to elect a President, Vice-President, council, and secretary of the College for the ensuing year. The following were elected:—President: Mr. L. Hepenstal Ormsby. Vice-President: Mr. Arthur Chance. Secretary of the College: Sir Charles A. Cameron, C.B. Council: Sir Philip Crampton Smyly, Mr. Henry Rosborough Swanzy, Mr. Edward Hallaran Bennett, Mr. William Stoker, Sir Charles Alexander Cameron, C.B., Mr. Austin Meldon, D.L., Mr. John B. Story, Sir William Thomson, C.B., Sir Charles B. Ball, Sir Thomas Myles, Mr. John Lentaigne, Mr. Richard D. Purefoy, Mr. Henry G. Sherlock, Mr. R. Bolton M'Causland, Mr. Robert H. Woods, Mr. Thomas Donnelly, Mr. William Taylor, Mr. Edward H. Taylor, and Mr. G. Jameson Johnston. Members of the court of examiners are not eligible for seats on the Council.

Public Health of Dublin.

[illegible] in reference to the public health of Dublin are [illegible] ver, measles, whooping- [illegible] but small-pox, of which a [illegible] s now on the decrease and [illegible] originally infected area on [illegible] successful prosecutions of [illegible] ment of cases have resulted [illegible] s notified as suffering from small-pox has decreased week after week in the city. Professor E. J. McWeeney, pathologist to the Local Government Board, has recently made public in a lecture delivered on May 25th some interesting statistics which he obtained from the Registrar-General. As regards tuberculosis—which is on the increase in Ireland while being fairly successfully dealt with elsewhere—it appears that during the year 1902 that disease, which is not notifiable, caused 1736 deaths in [illegible] while all the infectious diseases g[illegible] nsible for only 924. In reference [illegible] opinion was expressed that suitable sites might be obtained either in the Dublin mountains or in the large grazing districts of the north-western portion of the county, the fact being that if a patient was placed in a suitable ambulance car—preferably motor—it did not affect him much whether the distance was two miles or ten. With regard to measles he remarked that Dublin had suffered from a severe epidemic with 392 deaths last year. Whooping-cough caused 69 deaths and scarlet fever 76 The statistics in reference to diphtheria are interesting, for that disease was almost unknown in Ireland 15 years ago. There were no less than 473 notifications last year with 85 deaths. The mortality for the previous ten years averaged 42, so that a marked increase of deaths from diphtheria has certainly occurred in the Dublin registration area of late years.

The Sanitation of Dublin.

The Commissioners of National Education in Ireland have recently issued a memorandum to the managers of national schools respecting what they term "the extremely unsatisfactory condition of many of the national schoolhouses in regard to repair and cleanliness." The memorandum goes on to enumerate in detail the "disgraceful state" in which many schoolhouses are kept in respect to sanitary arrangements, and calls upon the managers, unless they are prepared to take the risk of losing State aid altogether, to exercise systematic supervision over the school premises. It is rather late for the commissioners to investigate and to take action as regards this matter, for, although the inspectors of the Board have reported many times in reference to it, it has remained a sanitary disgrace to Ireland for years. The able inspector from THE LANCET, who came over to this country some years ago in order to investigate the causes of the high death-rate in Dublin, was surprised at the state of things as regards personal sanitation which prevailed here. He remarked that the poor people in Dublin even when perfect sanitary arrangements were available did not seem to know how to use them. There can be no doubt that the fault really lies with the managers of the national schools of Ireland and it is full time that the Board should proceed to institute a reform. One of the most experienced national school inspectors mentioned to me some time ago that the condition of the sanitary arrangements in his schools—many hundreds—was such that it would be far better if such premises were non-existent. The *Irish Times*, in a leading article on the subject, says:—

> It is to be hoped that the Commissioners of National Education, now that they have taken the matter in hand, will firmly insist on a systematic and satisfactory supervision of the school premises on the part of those who are locally responsible for their maintenance. In this course they will be firmly sustained by the public opinion of the country.

The Granard Nursing Scandal.

The nursing trouble at the Granard union has been temporarily settled. At a meeting of the board of guardians on June 1st Dr. Joseph Smyth, Local Government Board inspector, appeared and recommended that no action should be taken, in the hope that by removing certain defects in the nursing arrangements of the house the causes of official friction between the nun nurses and Dr. J. M. S. Kenny might be removed. After a protracted debate that course was adopted. The guardians promised to appoint a fully qualified nurse at a salary of £35, while the nursing nuns consented to stay on as nurses for another two weeks.

The Poor-law Medical Service in Ireland.

The casual reader of an Irish newspaper at the present moment must see from the constant references to disputes between medical men and the local and central authorities that matters cannot long go on as at present. References have already been made in THE LANCET[1] to the difference between Dr. E. C. Thompson, M.P., and the Omagh guardians. He demanded 12 guineas for his four days' attendance for Dr. H. B. Fleming (they had previously summarily dispensed with Dr. Thompson's services); they offered three guineas. On June 6th Dr. Thompson's solicitor sent a letter on his behalf to the effect that three guineas is the minimum fee fixed by the Irish Medical Association for a medical man who agrees to act for so small a fee and was never intended to apply to such a case as the one under discussion, nor to a practitioner of the standing of Dr. Thompson, nor did the guardians appear to take into consideration the fact that by their action they deprived Dr. Thompson of fees for the remainder of the time during which Dr. Fleming was unable to perform the duties. In these circumstances Dr. Thompson declined the offer of the guardians but was still open to accept a reasonable sum rather than to resort to a court of law. The guardians have decided to fight the case on its merits and it is hoped that Dr. Thompson will give them the chance. At the same board Mr. James Hamilton of Dromore wrote that he could get no substitute to act for him at the fee offered by the board and that he would therefore ask for no vacation at present; while Mr. Thomas Duncan, medical officer of the Fintona dispensary, wrote in reference to some disparaging remarks made by the guardians in reference to his fee for attending at Fintona petty sessions in a vaccination prosecution that he only did so on receiving an intimation from the public health committee in Dublin. A guardian said that this letter should be treated with contempt and thrown into the wastepaper basket—that is, a medical man who obeys the central controlling body in Dublin is censured by the local authorities in his own district. At a meeting of the Coleraine rural council on June 6th a letter was read from the Local Government Board in reference to a fee of £2 2*s.* due to Dr. J. Lennox, J.P., of Kilrea, for attending the Coleraine quarter sessions on behalf of the council, to the effect that in a case like this "the council might pay the medical officer concerned not less than one guinea and not more than two guineas." Naturally, the council after this oracular statement resolved to ask Dr. Lennox if he would accept one guinea, which it is to be hoped he will decline. It is most unfai to the medical officer to put him in this position, and obliges him him to fight the case, while the Loca Government Board should say when appealed to whethe he is entitled either to what he claims (£2 2*s.*) o to one guinea. It is this vacillating, hesitating polic which largely keeps up the present unpleasant frictio between the medical officers and the guardians. Again at a meeting of the Londonderry guardians on June 6th the clerk stated that the Local Government Board ha written sanctioning the payment of one guinea to Dr. F. A Craig for acting as substitute for Dr. James Craig dispensary officer, but had not replied whether the guardian could deduct that amount from the salary of Dr. Jame Craig, as it had been asked to do. These cases which have cited—and they are examples of what is now constantly occurring all over Ireland—show to what a pass w have come in medical matters in Ireland. The feeling i becoming stronger, even amongst moderate men, that befor long if their reasonable demands are not granted the whol of the medical dispensary officers of Ireland will resign e *masse*, relying on the rest of the profession in that country t support them in their struggle by not applying for thei posts.

The Poor-law in Ireland.

A viceregal commission, consisting of Mr. W. L. Mick one of the Commissioners on the Local Government Boar for Ireland (chairman), Mr. George Murnaghan, M.P. (chai man of the Omagh board of guardians) and Dr. E. O. Bigge medical inspector of the Local Government Board, has bee appointed by Lord Dudley to inquire into, and to report o the following subjects:—

1. Whether any Poor-law unions could be dissolved with advanta to the ratepayers and without hardship to the sick and destitute poo and if any such dissolution be deemed desirable what arrangements l amalgamation of unions or otherwise should be substituted therefor.
2. Whether, in the event of any unions being amalgamated and t workhouses thereof being no longer required for Poor-law purpose such workhouses could with advantage be taken over by count councils for auxiliary lunatic asylums under Section 76 of the Loc Government (Ireland) Act, 1898, or could be otherwise utilised for a public purpose.
3. Whether it would be possible, either by an arrangement for t maintenance of paupers in adjoining workhouses or by combining number of unions for the purposes of indoor relief, to make bett provision for the classification and treatment of the inmates, especial the aged and infirm sick, lunatics, and children chargeable to the sa unions, and whether any changes in the law and procedure as to t administration and chargeability of relief would be desirable in t event of such combination of unions being carried out.
4. Whether, having regard to the number and capacity of workhouse hospitals, and infirmaries existing in any county, union, district, locality, and to the other provisions for the relief of the sick poor, a additional accommodation is now required for the proper treatment the sick poor, and, if additional accommodation is necessary, how might best be provided.
5. Generally to inquire and report whether any and what administr tive and financial changes are desirable in order to secure a mo economical system for the relief of the sick, the insane, and all clas of destitute poor in Ireland, without impairing efficiency of admin tration.

Great surprise has been expressed in medical circles that r direct reference has been made for the consideration by th commission of the grievances of the medical officers und the Poor-law system and it is regarded as very extraordina that those responsible for drawing up the references ha paid no consideration to the present widespread feeling i Ireland on the question. The natural result will be that t combination plan will be pushed on, as neither from t central authority (the Local Government Board) nor fro the guardians can the Poor-law medical officers receive a fair consideration of their just claims. The profession h only to remain true to itself and the victory will soon be wo

June 9th.

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[1] THE LANCET, May 23rd (p. 1485) and 30th (p. 1550), and June 6th (p. 1621), 1903.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Radioscopy in the Examination of Candidates for Life Assurance.

THE Third International Congress of Medical Officers of Life Assurance Companies was held in Paris from May 25th to 28th and gave rise to several interesting discussions, including one upon the radioscopic examination of candidates for life assurance. M. Béclère said that the [illegible]ine was the discovery of [illegible] inspection of the skeleton [illegible] to the state of the viscera. [illegible] present themselves in the case of insurance proposals, but radioscopic examination of the contents of the thorax is proving itself every day to be as useful as percussion and auscultation. These two latter methods only supply information as to the state of the more superficial structures, whereas radiography shows what is going on in the deep parts and enables the dimensions of organs to be ascertained. The Roentgen rays are a marvellous means of diagnosis, capable of rendering great services to life insurance companies. In this department of medical work the rays will find their chief application in the examination of the thorax and in the detection of otherwise unrecognisable disorders of the organs of respiration and circulation. Radioscopic examination of the thorax is indicated when pulmonary tuberculosis, cardiac hypertrophy, or aortic aneurysm is suspected. Various speakers discussed the subject and the opinions expressed by M. Béclère were generally accepted.

Respiratory Insufficience in Pulmonary Tuberculosis.

At the meeting of the Academy of Medicine held on June 2nd M. Mendel gave an account of an investigation of the respiration in tuberculous patients which he had made by means of the pneumograph. He had found that when a solution consisting of 5 per cent. of eucalyptol dissolved in olive oil was introduced into the air passages the effect in favourable cases of tuberculosis was the immediate production of a thoracic expansion which was observable for several hours; in the event of this result not occurring the prognosis was serious. When tracheal injections of oil containing eucalyptol were given daily for some weeks this expansion became permanent and the patient's manner of breathing might undergo considerable modification. Simultaneously [illegible]ral state improved, his [illegible] strength and weight. [illegible]culous cases appeared, [illegible]acterial infection from which they suffered and the degree of which was variable, but also to the impairment of their respiratory functions—an impairment which might be accounted for by the pulmonary lesions and the consequent encroachment on the respiratory area.

Compulsory Vaccination for Tunisian Immigrants.

An official note which has been the subject of lively comment among the Italian colony in Tunisia has just been put forth by the Government of that protectorate. The note decrees that henceforward immigrants upon disembarking at Tunisian ports will have to be medically examined and if it be considered necessary will have to be vaccinated. First- and second-class passengers will not be held to be immigrants. Moreover, a fee of 50 centimes will be charged for each vaccination. Entrance to the country can be refused to any immigrant who declines to submit himself or his children to medical inspection or vaccination.

Tænia Solium as a Detective.

It could hardly be imagined that tænia solium would aid in the discovery of a crime but an instance has occurred in the department of Eure. A convict in prison suffered from tænia for which he was treated by the medical officer. Some little time afterwards the convict, whose sentence had expired, was set at liberty, and within a few days a house in the neighbourhood was broken into. On the police examining the scene they found some excrement deposited in the middle of the room, in accordance with a gross jest which is common among some of the criminal classes. In the motion were several joints of a tænia and the examining magistrate set on foot inquiries among recently released prisoners. The man above referred to was promptly re-arrested and he, though much surprised, confessed to the crime at once.

June 9th.

SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

The Care of Mentally Deficient Children.

THE Swiss Society for the Care of Mentally Deficient Children held its fourth annual meeting at Lucerne on May 11th and 12th. This society, which is doing excellent and very necessary work, finds support among all classes of society. The meetings were attended by an average of 220 ladies and gentlemen, including medical practitioners, clergymen, teachers, and representatives of various cantons of Switzerland. Most of the cantons, it may be remarked, have made joint arrangements to promote the aims of the society. Mr. Auer, the president, read a report on the progress of the work. At the beginning of the year 1901 there were in Switzerland 18 institutions accommodating 748 mentally deficient children (idiots). At the present time 868 are provided for in Switzerland and 91 have been placed in suitable establishments in Germany. Four new establishments with accommodation for 54 pupils have been opened and a new establishment for mentally deficient deaf-mutes has been opened at Turbental. According to the statistics read the number of special school classes for pupils who cannot well attend the ordinary classes in the State schools has greatly increased. In 18 Swiss towns there are now 53 such classes with 1096 pupils. Dr. Ulrich, medical superintendent of the Swiss epileptic home in Zürich, delivered an address on the Origin and Prevention of Mental Deficiency. The public, he said, were in need of instruction as to the various reasons of mental deficiency and the importance of hereditary influences. Measures ought to be adopted for the reduction of alcoholism, syphilis, tuberculosis, and cretinism, and provision must be made for the relief of the poor. Dr. Schenker of Aarau strongly advocated legal interference with regard to marriage in the case of the mentally deficient.

Swiss Society for School Hygiene.

This society, which now has 600 members, held its fourth annual meeting, which was well attended, at Schaffhausen on May 16th and 17th. Mr. Paul Lincke described a variety of practical details connected with school baths. All the newly built schools in Switzerland have now a portion of the premises appropriated for purposes of baths. Each class bathes about once a fortnight, summer and winter. The bathroom should be on the ground floor and should have from 16 to 24 baths placed at a distance of about one and a half yards from each other, so that a class of 60 children can bathe in an hour. Dr. Ost, school medical officer at Berne, spoke on the hygienic side of the question. These baths, he said, soap being used and a warm bath being followed by a cooler one, according to medical regulations, serve to take the place of hygienic methods often neglected at home. Proper excretion and secretion are thereby insured and cleanliness is encouraged. Such baths, which of course are not obligatory, should be universally introduced, only sick children and those who are suffering from skin diseases being excluded. They are also advantageous from an educational point of view, as the parents learn to take an interest in the proper hygienic treatment of the skin. Dr. Laubi of Zürich described his examinations of school children with regard to their auditory functions. He recommended that all children on entering school at the age of six years should be examined by a general practitioner or an aural surgeon, and should be re-examined in the event of them suffering from any infective disease. A second examination before leaving school, at the age of 14 years, was also desirable, as important advice might be given with regard to the choice of an occupation. Children whose hearing was very bad and who were incurable should be referred to institutions or private tuition; others should be placed temporarily in asylums for the deaf and dumb, or at school should sit in the front seats. Children with aural discharge (otitis media) should only be allowed to go to school if under proper medical care and if their ears were properly bandaged to avoid the spread of infection. Children with adenoids should be put under the supervision of the medical officer. Dr. Keller of Winterthur afterwards spoke at some length about overwork in the higher school classes in which the pupils were from 12 to 16 years of age and he pleaded for a reduction of school work in the interest of health.

Tuberculosis of the Kidney.

Dr. F. Suter of Basle has published an account of 42 cases of tuberculosis of the kidney, with special reference to the diagnosis and surgical treatment of this condition. The cases were all treated in the private clinique of Professor Burckhardt. Heiberg found by post-mortem examination that tuberculosis of one kidney occurred in 7 out of 15 cases of urogenital tuberculosis and in 17 out of 30 cases of metastatic tuberculous disease of the kidney. This is also proved by necropsies of cases which succumb after operation and clinically by the after-results of nephrectomy performed to remove one tuberculous kidney. As regards diagnosis the microscopic and chemical examination of the urine reveals nothing positive, whereas the bacteriological evidence is conclusive. In 40 out of 42 cases of tuberculous kidney no bacterial growth was obtained on culture media on which the tubercle bacillus does not develop; in the other two cases there was a growth of staphylococcus and bacterium coli which had no doubt been introduced by local instrumental interference. Appropriate culture methods revealed the existence of the tubercle bacillus in each one of the 42 cases. This is especially important, as the diagnosis may otherwise be very difficult. Such symptoms as a distinct tumour or pain on pressure being often doubtful cystoscopy is always necessary to determine which kidney is affected, the operation being contra-indicated if the other kidney is not proved to be healthy. Sometimes further investigation by experimental glycosuria, by administration of methylene blue, and by the determination of the urea derived from each ureter is necessary, or it may be desirable to determine the freezing-point of the urine excreted by each kidney (Korányi). If no operation is performed the disease will prove fatal sooner or later. Dr. Suter has published an account of 14 nephrectomies with two deaths. In the fatal cases the other kidney proved to be healthy. The 12 patients either recovered completely or their condition was greatly improved for years. Küster reports on 300 cases with a mortality of 28 per cent. Israel in Berlin has had 28·5 per cent. mortality.

Zürich, June 3rd.

NEW YORK.

(FROM OUR OWN CORRESPONDENTS.)

Adoption of a New Code of Medical Ethics in the United States.

PERHAPS the most important business transacted at the recent meeting of the American Medical Association, held in New Orleans, was the adoption of a new code of medical ethics. Dr. Harris, who read the proposed enunciation of principles of ethics, before doing so read the following special report in explanation of the action of the general committee on code.

> To the President and Members of the House of Delegates.
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> Your committee has given extended and careful thought to the proposed revision of the code of medical ethics referred to it for consideration. As you will note on caption of report, the word "code" has been eliminated and the expression "the principles of medical ethics of the American Medical Association" adopted as adequately descriptive. In reference to this change it is proper to say that such action on its part is based on the idea that the American Medical Association may be conceived to occupy some such relation to the constituent State associations as the United States through its constitution holds to the several States. The committee for this reason regards it as wiser to formulate the principles of medical ethics without definite reference to code or penalties, thus leaving the respective States, &c., to form such code and establish such penalties as they may regard to be fitting and proper for regulating the professional conduct of their members, provided, of course, that in so doing there be no infringement of the established ethical principles of the association. The committee regards as wise and well intended to facilitate the business of the parent organisation and promote its harmony, this course, which leaves to the State association large discretional powers concerning membership and other admittedly State affairs.

The report, which is voluminous, contains three chapters and 53 sections. It would seem to cover the whole ground of professional ethics. Perhaps the most far-reaching and radical change in the code is that embodied in Section I., Chapter 2, which reads:—

> Everyone on entering the profession and thereby becoming entitled to full professional fellowship incurs an obligation to uphold its dignity and honour, to exalt its standing, and to extend the bounds of its usefulness. It is inconsistent with the principles of medical science and it is incompatible with honourable standing in the profession for physicians to designate their practice as based upon an exclusive dogma or a sectarian system of medicine.

Utilising Refuse from a Consumption Sanatorium.

The Third Appellate Division of the Supreme Court of New York had under consideration a case of conviction for disobedience of a lawful order of a board of health. It held that unless the order disobeyed was one lawfully made by the board of health the accused had been guilty of no crime. The order was one forbidding him from drawing into the corporate limits of the village any more refuse from the table and kitchen of a sanatorium for consumptives which he had been collecting for food for his chickens and hogs. There was no proof that this refuse from the sanatorium for consumptives was any more dangerous to the community than the refuse from any hotel and the court could not assume such to be the case in sustaining this conviction. Had the board of health, then, the right to forbid a person from bringing into the village refuse from any hotel or other public house, the court asked. Under the evidence in this case, it said, such refuse while it was fresh was wholesome food for hogs and fowls. The menace to the public health lay in permitting it to remain until it decayed and threw off a stench which was prejudicial to the comfort of the community if not to its health. As long, therefore, as the mere bringing into the community fresh refuse from a public place had in it no element of threatened danger to the comfort or health of this community the court was unable to see by what authority the board of health was permitted to prohibit the same. For this reason, it was added, the commission of a crime had not been proved and the judgment of conviction must be reversed.

The Sanitation of Cuba.

In a recent issue of the *New York Sun* is a long article on "The Sanitation of Cuba." This article would appear to minimise somewhat the importance of the work done by Americans in cleaning up the towns of Cuba. A part of the article in question runs as follows: "In view of all that has been said of the sanitary work of the United States in Cuba there are certain facts which stand in glaring prominence before the thoughtful investigator. For instance, virtually all of the work done has been purely superficial. With any suspension of broom-and-shovel energy every city in the island, with the possible exception of Santiago, which got a considerable amount of permanent paving, would speedily revert to its former condition under the Spanish rule. Little or none of our work has been either radical or lasting. A second point appears in the fact that to American authority is due the direct prevention of more radical measures. The Foraker law, most commendable in its general purpose and operation, prevented the granting of any concessions or franchises for public work. The sewering and paving of the city were definitely obstructed and delayed by American officials." The article goes on to say that Cuba is to-day little improved in her real sanitation beyond her condition in January, 1899. This account would seem to be on the face of it and judging from results decidedly prejudiced. The fact remains that in all the towns of Cuba the death-rate has been decreased and yellow fever apparently abolished. Surgeon-General Wyman of the Public Health and Marine Hospital Service, declares that Havana can no longer be regarded as an "endemic centre" of yellow fever, for under American rule followed by the new insular government Havana has become one of the most healthy cities of the world. In his opinion the time has passed when it was necessary to disinfect every ship that arrived at a southern port from Cuba. The Louisiana board of health, however, insists on the disinfection of vessels arriving at ports in that State from Havana and other Cuban ports and the authorities in Alabama have taken a similar course.

May 29th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Infectious Disease in Victoria.

TYPHOID fever is unusually prevalent just now in Victoria. So also is scarlet fever. An epidemic, of local origin, from water pollution has occurred at a camp of workmen employed on irrigation works at Waranga. There are about 500 people living in the camp and 45 have been attacked with typhoid fever, two fatally. Dr. D. A. Gresswell, chairman of the Board of Health, inspected the camp and found that the water-supply was seriously polluted. In the metropolis all cases of infectious disease are taken to the Melbourne Hospital which has not nearly sufficient accommodation for them. The Queen's Memorial Hospital for Infectious Disease still remains unopen but there is some prospect of a satisfactory arrangement being come to. The committee of the

Melbourne Hospital, and also representatives of the municipalities, interviewed the Minister of Health and explained the position, with the result that the Minister promised to recommend to the Cabinet that the Government should pay half the cost of maintenance. For the fortnight ending April 11th 206 cases of scarlet fever were reported, whereas for the corresponding period last year 17 cases occurred.

The Use of Preservatives in Food in New South Wales.

A recent regulation of the Board of Health of New South Wales sets out that boric acid should only be used in the manufacture of concentrated milk, among other things, in the proportion of $\frac{1}{1000}$th of a grain *per pint* or *per pound*. This means that practically no preservative at all should be used, for the quantity set out would not have the slightest effect on the milk. The Board of Health, along with other sanitary authorities, believes that none is required, but according to the wording of the statute a certain amount must be specified. That is why the absurdly small proportion of $\frac{1}{1000}$th of a grain is fixed upon. On the other hand, it has been represented to the treasurer that unless some modification is made in this regulation it will be impossible to carry on the industry. The State treasurer held a conference with the board on April 14th with the view of ascertaining whether a compromise could not be effected which, while safeguarding the public interest, would enable the manufacturers to proceed with their business. However, after consultation it was decided to adhere to the board's regulation.

An Alleged Cancer Cure.

A deputation, styling itself the Victorian Cancer Research Association, waited on the chairman of the Board of Health to submit three alternative propositions. The first was that a departmental scientific inquiry should be made as to the effectiveness of an alleged cure for cancer practised by a layman calling himself "Professor" Davis; secondly, that a medical man should be selected to work with the "professor" who should be immune if a patient should die under treatment; and, thirdly, that the Government should purchase the specific if cures were effected. The deputation was most enthusiastic in its advocacy of the new treatment, stating that the "professor" had succeeded where medical men had failed. It professed to have a horror of the knife of the surgeon and to have a profound belief in the remedy applied. Dr. Gresswell, in reply, pointed out that in four out of five cases in which patients had died under the "professor's" treatment a considerable quantity of arsenic had been found in the bodies. Further, he said, the "professor" did not claim to cure internal cancer, only superficial growths, and these were cured by medical men, in some cases without resort to the knife. He had no doubt that the ingredients of their lotions were similar to those used by the "professor," only that they were applied in different quantities. As the "professor" would not disclose his secret he saw no use for a Government inquiry. As to the second proposition he had no power; it involved an alteration of the present law of the land. He concluded the interview by stating that the deputation had not shown him how he could help it at all in the matter.

Hospital News.

The report presented to the annual meeting of the supporters of the Prince Alfred Hospital, Sydney, stated that the hospital had now been opened for 20 years and would attain its majority on Sept. 25th next. As it had grown in years, so it had grown in usefulness, and during the past year showed an advance in every respect. The number of in-patients reached its high-water mark in 1901 and last year the number was practically maintained, while the serious operations numbered almost 200 more than in the previous year, the total having reached 2077. The congested state of the wards, to which reference had been made year after year, had continued, so that with 236 beds available there were 230 always occupied on the average, which meant that on some days there were a great many more than this number. As a matter of fact, as in 1901, no less than 252 patients had been in residence on certain days. This meant that shakedowns and other temporary accommodation had to be resorted to, but this state of things would be remedied when the new pavilions were opened.—The governors of the Melbourne Hospital decided last year that the honorary staff should be increased by the appointment of a fifth indoor physician and a fifth indoor surgeon. The committee has given effect to this decision by appointing the senior physician to out-patients, Dr. J. E. Nihill, and the senior surgeon to out-patients, Mr. G. A. Syme, as physician and surgeon to in patients respectively; to the positions on the out-patient staff thus made vacant the committee has appointed, as physician, Dr. J. F. Wilkinson and as surgeon, Dr. J. Gordon.

A Medical Man committed for Perjury.

At the Fitzroy (Victoria) Court Dr. Abraham Wheeler was committed for trial on a charge of perjury. On March 25th Dr. Wheeler was fined for using insulting language and on that occasion swore that he did not use the language attributed to him. In so swearing he was stated to have committed perjury. The evidence was conflicting, but the police magistrate considered a *primâ-facie* case had been made out and he would leave the matter for a jury to decide.

Obituary.

The death is announced of Dr. Richard Ryther Steer Bowker, M.L.C., at the age of 88 years. For some time past he had been ailing and on April 3rd he passed peacefully away. Dr. Bowker was born in Lincolnshire in 1815. At the age of 16 years he was apprenticed at the Nottingham General Dispensary. After serving his time there he became a student of medicine in Scotland, afterwards in London, and finally in Paris. He commenced to practise at Bingham in Nottinghamshire at the age of 22 years, and quickly gained an extensive practice. But his health failing him he was compelled to take a long sea voyage, so he obtained an appointment as medical superintendent of an immigrant ship and ultimately settled in Newcastle, New South Wales Again his medical skill and genial disposition soon won for him a large practice and a number of friends. When he first settled in the colony he associated himself with many public movements and the services he rendered to Newcastle were recognised by his fellow townsmen who in 1856 asked him to stand for Parliament. He was elected to the Assembly in the same year, but on the dissolution of the House in 1859 did not offer himself for re-election. He removed to Sydney shortly afterwards and was in 1877 again elected as one of the free-trade representatives of Newcastle. Subsequently he was appointed to the Legislative Council and although he never took a very active part in politics he was a constant attendant at the House. Although of late years Dr. Bowker, owing to his extreme age, was practically compelled to give up the practice of his profession, he was in his prime one of the most skilful surgeons in Australia and earned for himself a great reputation as an ophthalmic surgeon. In 1858 he married Lydia, the youngest daughter of Mr. Phillips of the Paterson, who died in 1878 Three daughters and five sons, all of whom are medical men, survive him.

May 4th.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN.—This hospital is being rebuilt and reorganised. The sum of £50,000 is urgently needed and this need will be brought before the eyes of the public by means of a captive balloon which is to float over the site. The ladies' committee which has been formed to help the hospital will meet about the end of June.

LITERARY INTELLIGENCE.—Mr. Heinemann has just ready for publication a small volume entitled "Hay Fever and its Successful Treatment." Sections are devoted to its history, causes, time of occurrence, duration, &c., and there is a discussion upon the pollen theory. The author is Mr Hollopeter, clinical professor of pediatrics in the Medico-Chirurgical College of Philadelphia and a Fellow of the American Academy of Medicine.—The following books will be published in June by Messrs. J. and A. Churchill: "The Microscopical Examination of Foods and Drugs," by Mr. H. G. Greenish, professor of pharmaceutics at the Pharmaceutical Society; "Serum-Therapy," by R. T. Hewlett, professor of general pathology and bacteriology, King's College, London; "Disinfection and Sterilisation for Nurses and Others," by Dr. F. W. Andrewes, lecturer on pathology at St. Bartholomew's Hospital; "Modern Bullet Wounds and Modern Treatment," by Major F. Smith, R.A.M.C., D.S.O.; "On Syphonage and Hydraulic Pressure in the Large Intestine," by Dr. R. W. Leftwich; "An English Handbook to the Paris Medical School," by Dr. A. A. Warden, physician to the Hertford British Hospital, Paris; the second edition of "Infant Feeding," by Dr. E. Cautley; the fourth edition of "Lectures on Medicine to Nurses," by Dr. H. E. Cuff; and the fifth edition of "Uric Acid," by Dr. A. Haig.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

SATURDAY, MAY 30TH.

THE Council resumed its proceedings, Sir WILLIAM TURNER, the President, being in the chair.

Final Examinations.

Mr. BRYANT moved the adoption of the reports from the Examination Committee on the inspection of the final examinations of the Universities of Victoria, Durham, and Cambridge which were received and entered on the minutes yesterday.

After a brief discussion on minor points of detail the motion was adopted.

The Society of Apothecaries of London.

Mr. BRYANT presented a report from the Examination Committee on the inspection of the primary examination in chemistry, physics, and biology of the Society of Apothecaries of London. The committee stated:

> This examination is in many respects similar to the examination held by the English Conjoint Board in the same subjects. The latter body does not accept the Apothecaries' examination *in lieu of its own*. The Apothecaries' Society does accept the examination of the Conjoint Board. Certain points of difference between the two are indicated in the report of the visitors.
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> *Biology.*—There is no paper and no practical test, the examination, as at the Conjoint Board, being of a purely oral character. Conducted on the same lines as the last-mentioned examination and, as far as the visitors could judge from the two candidates who alone presented themselves for it, the examination is of a very similar standard. The visitors consider that the examination would be much improved by the addition of a paper and practical work. This committee agrees with the visitors in the recommendation to add a written and practical part to the examination in biology.
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> *Physics.*—The paper work in connexion with this subject consists of two questions on the same paper as that dealing with chemistry; nust be answered. In this respect the examina- the Conjoint Board, but in addition there is *a feature which is lacking in the other case.* The oral examination forms a part of that dealing with chemistry and the report shows that it is of a practical character. The practice of the Society in requiring an oral examination is commended by the visitors. They suggest that three questions should be set in the physics section of the paper, that the candidates should be required to answer at least two of these, and that no candidate should be allowed to pass in physics should he fail to secure adequate marks in that subject, even if he should obtain 50 per cent. on the entire paper. With these recommendations the committee concurs and in addition desires that the subject of physics should be dealt with in a separate paper.
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> *Chemistry.*—This examination closely resembles that of the Conjoint Board, being, according to the opinion of the visitors, stronger in one respect and weaker in another. It is stronger in that every candidate is required to submit to an oral examination, a test which is only demanded from those on the line by the regulations of the Conjoint Board. On the other hand, it is reported that the practical examination does not include the preparation and exhibition of specimens of compounds. The visitors regard this as the most valuable part of the practical work demanded by the Conjoint Board. With respect to the practical examination the visitors report that the standard is too low and that "it is of a kind that is of extremely little value, either as a training for the student's intellectual powers, or as a preliminary to the study of physiology, or as giving him something that would be useful to him in his future career." From what has been said it will be gathered that the visitors do not regard this examination as a sufficient test nd of their first year in the subjects with ew the committee concurs. The court of the Council for its report, and promises that it shall have careful consideration.
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> The committee trusts that the deficiences to which attention has now for the first time been called will not merely be noted by the court but that they will be rectified and thus bring the examination up to a sufficient standard. The committee is in agreement with the visitors "that the average training of candidates is insufficient for men who are commencing medical studies."

On the motion of Mr. BRYANT the report was received and entered on the minutes and its consideration was postponed till the special meeting on July 15th.

The Finances of the Council.

Sir VICTOR HORSLEY presented the following report from the Financial Relations Committee of which the President is chairman:—

> It was resolved that the committee approve, and recommend the General Council to adopt, the President's memorandum on the present inadequacy of the income of the Council as the basis of an appeal to the proper authorities. The committee proceeded to consider a summary of suggestions received from members and the General Registrar as to economies that might be practised by the Council. The committee cannot recommend the General Council to adopt any of the modifications suggested for the conduct of penal business. As to the days of the session and their duration, the committee recommend that one hour be added to the daily session of the Council and that the hours of sitting be from 1.30 till 6.30, except on Saturday. The committee also recommend that on the first day of each session of the Council standing committees should meet at 12 o'clock noon. Of the suggestions made as to the fees of members, the committee approve the following:—1. That members should be paid for their services, and that the fee should continue to be £5 5*s.*, as at present. 2. That the travelling expenses of members by rail and steamer should, in accordance with the approved practice in the public service, be limited to the actual outlay, together with some fixed allowance, say one guinea, for incidental expenses to and from London. The committee to amendments in the rules of debate. *Council* to appoint a small committee site of the Council office, to consult an expert valuer as to the value of the Council's property in Oxford street and Hanover-square as a whole or in parts, and report to the Council. With re ee recommend:—1. That the issue of the minutes should be discontinued. rly volume of minutes to be ordered should be 200 instead of 300. 3. That as soon as possible the printing of the Medical Register should be transferred to the Council's own printer. 4. That 1000 copies should be ordered each year instead of 1350 as at present. 5. for leave to raise the committee postponed ment Bill, which was included in the reference, pending the result of an appeal *to the Government for a grant towards meeting* the deficiency in the Council's income.

Sir VICTOR HORSLEY moved the adoption of the recommendation.

> That the Council adopt the President's memorandum on the present inadequacy of the income of the Council as the basis of an appeal to the proper authorities.

Dr. WINDLE, in seconding the motion, said that the President's memorandum contained a reference to the Incorporated Law Society which received a grant from the Treasury and he (Dr. Windle) would suggest that a reference should also be introduced *in relation to another body* which had powers almost analogous to the General Medical Council—namely, the Teachers' Registration Council which was formed under the powers of the Education Act of 1899. The latter body was not responsible to the Privy Council like the General Medical Council, but was responsible to the Education Department The income of the Teachers' Registration Council would never reach more than £800 or £1000 per annum and the expenses could hardly be less than £2000 a year. When the Order in Council was laid on the table of the House of Commons a question was raised by a Member as to the financial position of the body and it was pointed out that it was impossible that it could be self-supporting. The reply of Sir John Gorst was to the effect that in that case the Education Department would have to make good the deficit Dr. Windle would therefore suggest that the Teachers' Registration Council would be a very proper parallel to introduce into the President's memorandum.

The PRESIDENT said that he would consider the matter.

Dr. NORMAN MOORE said that he could not agree to the committee's recommendation. The Council had no right whatever to ask for money from any public body. The present session showed that they did not manage their business affairs in a satisfactory way. The cases that were brought before them by the Penal Cases Committee were drawn up in a way which led to an enormous waste of time. Speaking generally, he was entirely opposed to the principle of going to the Government and asking for public money. If the Council passed a resolution that the fees *for* registration ought to be increased they would be trying to get money from their own profession. He should disapprove of that, but he should disapprove of it much less than applying to the Government for a grant. He thought that the Council had in a variety of ways endeavoured to grasp powers which were beyond it, and had given an amount of time to various subjects which it would have been much better if it had left alone. Therefore, he was opposed to making any request fo a grant of public money.

Mr. BROWN did not think the time had arrived when a appeal should be made for a grant *from* Parliament. When he considered that the Council had invested in its building something like £40,000 and had other investments he could not see that its financial state was such as to necessitate an appeal to Government for money. Before it applied for public money, or for powers to exact more money from the medical profession, it should spend what it had He believed that much of the time of the Council might be saved in connexion with the work of the Penal Case Committee.

Sir VICTOR HORSLEY as a member of the Penal Case Committee objected on a point of order to Mr. Brown's and

Dr. Norman Moore's remarks. If the administration of the Penal Cases Committee was to be challenged it ought to be done on a direct issue. It was not fair to introduce the matter into a debate on the finances of the Council.

The PRESIDENT agreed with Sir Victor Horsley in his objection.

Dr. NORMAN MOORE said he was not attributing any errors to Sir Victor Horsley or anyone else. It was the methods of the Penal Cases Committee, not the conduct of individual members, that he objected to. He had criticised the general way in which the business was done.

Mr. BROWN said he was endeavouring to show that if the penal cases, instead of being referred to the Penal Cases Committee, were referred to the branch councils the expense would be infinitely less than it was under the present procedure.

The PRESIDENT pointed out to Mr. Brown that he was now raising a wider question than that immediately before the Council.

Mr. BROWN concluded by saying that he would vote against the motion because the Council had not yet exhausted its resources.

Sir CHRISTOPHER NIXON said that the work of the Council had very considerably increased in recent years and additional duties had been imposed upon it. If it was in the interests of the public at large that it exercised these duties, and especially in connexion with its penal jurisdiction, he did not see why the State should not pay the expenses that were incurred by the Council in carrying out that work. Why should the State not contribute to the legitimate expenses that were incurred by the Council in protecting the interests of the public? He thought that the Council had much more reason to apply to the State than to ask the medical profession to penalise itself to carry out work which was done in the interests of the State and the public at large. If the State refused to grant them any money the only alternative they had was to impose a penalty on the profession.

Dr. FINLAY thought that the strong justification for applying to the Treasury was the fact that so much of the work of the Council was in the interests of the public and not in the interests of the medical profession *per se*.

Dr. LITTLE supported the motion.

Sir JOHN TUKE pointed out that if a grant to the Council was placed on the Estimates it would be subject to the review and criticism of the House of Commons and to that extent the Council would lose its independence.

Dr. BRUCE said that the only criticism he could offer in connexion with the Penal Cases Committee was that perhaps it did not take as much legal advice as it might do

The PRESIDENT did not think that the position of the Penal Cases Committee was fully understood. That committee was in the position of a grand jury. There were certain *primâ facie* facts brought before it and all the committee did was to say whether there was a *primâ facie* case. All the cases had to be thrashed out in the Council and there was a quantity of evidence brought before the Council which the committee could not have before it. The committee exercised its judgment in the best way it could on the facts presented to it in the preliminary stage of the inquiry.

Mr. BRYANT: We have both our legal advisers with us in every case.

Dr. PYE-SMITH said that in dealing with money as trustees for other people there was one vice to be avoided—namely, profligate expenditure; but there was also another vice—namely, penuriousness and niggardliness, and they had to hit the golden mean. The golden mean was proverbially difficult to traverse. He ventured to think, if this motion was passed, that when they went to the Government and asked for help they would be met by this question: "How have you dealt with your money already?" and he doubted whether they could offer a complete justification for their expenditure. Their first business was to see what they could do with the money they had, and when, after making all retrenchments compatible with efficiency, they found that their funds were not sufficient, then they might justly go to the Government for help. He thought if they were asked they should have to confess that they did spend too much time in unprofitable wrangling and too much time in long meetings. And now they were threatened with more frequent meetings—more than two sessions in the year—and they were allowing the number of members of the Council and the number of their sittings to increase almost every year without taking any measures to prevent it. Before giving up their independence by applying for public money he thought they should use every means in their power to see what they could do to limit their expenditure. He would remind the Council of the blessed words, "Peace, retrenchment, and reform."

Dr. MACKAY said that Dr. Pye-Smith talked about the Council giving up its independence by applying for public money. He believed that no member of the Council would care to sacrifice his independence in that way. But he would point out in this connexion that the universities of Scotland, though they received a grant from the Government, were absolutely free from any interference or control except in so far as Parliament could by a special Act interfere with every institution in the country. If the Council got a grant from the Treasury—and he thought it should—it would not be accompanied by any condition which would hamper the work of the Council.

The PRESIDENT said that if the Council got money from the Treasury with the sanction of Parliament and that money was not on the Consolidated Fund it would be subject to review year by year when the vote was taken in the House of Commons. The moment the House had a vote submitted to it for consideration any Member could criticise and discuss it.

Dr. MCVAIL said he was a little confused by Dr. Pye-Smith's speech. He had now applied to the Council the term "profligate."

Dr. PYE-SMITH: No; I did not apply the term "profligate" to any member of the Council. What I said was that the Council should avoid the vice of "profligate expenditure."

Dr. MCVAIL said that if the Council was spending too much money surely the very best thing to do was to bring its profligacy under the notice of Parliament annually. He would welcome Parliament having annually the power of reviewing the work of the General Medical Council. He thought its action ought to be open to the inspection of Parliament. The Council was still in the possession of considerable funds. Was it a good time to apply to the Government for more money when it was in possession of a considerable surplus? Was it certain that in coming years the Council would have as much penal work to do? "Covering" cases had practically disappeared; the men now entering the medical profession were more highly qualified; and he anticipated in future years a considerable diminution in the number of penal cases that came before the Council. He was not at all in despair that the Council would be able in the future to save money, because he thought it was almost certain that its penal work would decline. He should therefore feel disposed to let this matter rest for the next two or three years. He did not think that the Government was in the least degree likely to listen to them if they made an appeal for more money at the present time.

Sir VICTOR HORSLEY, in replying to the discussion, said he hoped to bring up the whole question of penal work in a future session. Dr. Pye-Smith reminded the Council of the blessed words, "Peace, retrenchment, and reform," but there was another blessed word—"efficiency." It was just that efficiency which the Council lacked at the present moment because they were spending their accumulated funds. They had spent £10,000 in the last seven years. The President's memorandum would for the first time draw the attention of [illegible] of the Council. In order to [illegible]ney.

[illegible]ORSLEY'S motion was carried by 21 to 3.

The PRESIDENT: It is quite evident that the memorandum will have to have an alteration made in it in the direction indicated by Dr. Windle. When shall I do it?

Sir VICTOR HORSLEY: That must be left to your convenience. I move, Sir, recommendation No. 2, viz.:—

[illegible] following resolutions be adopted and :—
[illegible] day except on Saturday at 1.30 P.M.
[illegible]

(e) (1) That the [illegible] be discontinued (f) (2) That in future 250 copies only of the yearly volume of minutes be printed. (g) That as soon as possible the printing of the Medical Register be transferred to the Council's own printer. (h) That 1000 copies only of the Medical Register be ordered each year. (i) That application be made to the Treasury for leave to raise the price of publication of the Medical Register to 10s. 6d.

Sir JOHN TUKE seconded the motion.

Sir WILLIAM THOMSON opposed the extension of the daily sittings as proposed in (a). Even now when five o'clock was reached he felt that they did not care very much for the business. He did not think the work could be better done by adding to the hours for doing it.

Mr. JACKSON quite agreed with Sir William Thomson. He thought before he came to the Council that it did not work hard, but since he had been a member he had found out differently.

Mr. BROWN moved that the Council should not sit beyond six o'clock.

Dr. MACALISTER seconded this proposal. At present six o'clock meant seven to the Business Committee.

On a vote Mr. Brown's proposal was defeated by 13 votes to 11, and the Financial Relations Committee's recommendation (a) was rejected by 16 votes to 12. The other recommendations except (d) were carried; (d) was taken *in camerâ* and no announcement was made of the result of the consideration.

On the motion of Dr. MACKAY and supported on a vote by 21 members it was agreed—

That the fee for re-registration be raised to £1, that the fee for the registration of each additional qualification be raised to £1, and that the fee for public health registration remain as at present.

Finally, the Executive Committee was requested to take steps for making changes in the Standing Orders where necessary to bring them into conformity with the several motions passed.

Finance Committee's Report for 1902.

Mr. BRYANT moved that the following report, to which were appended the several carefully compiled tabulated statements referred to in it, should be received and entered on the minutes:—

The Finance Committee report that the income of the General and Branch Councils for the year ending Dec. 31st, 1902, was £8591 8*s.* 7*d.*; the expenditure for the same period was £9924 6*s.* 8*d.*, consequently there is a deficit on the year's working of £1332 18*s.* 1*d.*

From Table A it will be seen that the receipts from fees show a decrease of £349 8*s.*, the English Branch having received £49 5*s.* less, the Scottish Branch £346 6*s.* less, and the Irish Branch £45 17*s.* 6*d.* more than in the previous year.

A statement of the expenditure of the General Council compared with former years will be found in Table B. The following items call for explanation. (*a*) An increase of £793 16*s.* in General Council fees, mainly due to the special session in February which cost upwards of £650, though against this may be set the decrease of £80 in the cost of the Executive Committee meetings due to one payment for travelling expenses covering both meetings. (*b*) An increase of £115 1*s.* 6*d.* in law expenses; the case of W. A. Jones alone cost over £100. (*c*) An increase of £143 7*s.* 3*d.* in the cost of inspection of examinations due to the larger numbers of bodies under review. (*d*) The sinking fund and grant to the Irish Branch are dealt with below.

It will be noticed that wherever possible expenses have been kept down and that there has been a considerable economy in such items as printing and miscellaneous expenses. Table C shows comparatively the income and expenditure of the Branch Councils for the past three years: the English Branch had again to meet the expenses of a contested election. From Table D it will be found that the excess of expenditure over income is about £170 less than the average for the past seven years. The percentage rate is 94·48, which is 1·66 above the average. Table E shows that the assets of the branches have decreased by the amount of the year's deficit. The Pharmacopœia accounts, as will be seen from Table F, show a profit of £549 18*s.* 10*d.*, which is mainly due to the sale of the Government of India Edition of the Indian and Colonial Addendum. Of this sum £500 has been placed on deposit with the National Provincial Bank of England, being repayable at call and bearing interest at current rates, which roughly may be taken to be 1½ per cent. below Bank rate. The Bank of England allows no interest on deposits.

Sinking fund.—In accordance with the resolution of the Council notice was given to surrender the policy, the value of which proved to be £408 16*s.* The amount paid in premiums was £646 17*s.* 6*d.*, so that practically one year's premium was lost. The value of the policy has been credited to the General Council's receipts and it should be noted that the deficiency on the year's working is thereby decreased from what it would otherwise have been.

Irish Branch.—It was not thought necessary last year to give a grant to the funds of the branch and the result was that at the end of the year the net balance in hand was £78. It may be assumed that the receipts this year will be approximately the same as last—say £800—and it is expected that the expenses will be £100 less owing to the change in office arrangements; on this basis there will be a deficiency at the end of the year of about £250, and the committee therefore recommend that a grant of £300 be made towards the funds of the branch.

Dental Finance.—Table G shows that there was a surplus of income over expenditure of £249 12*s.* 10*d.* A further sum of £600 has been advanced to the English branch.

On the motion of Mr. BRYANT, seconded by Dr. PYE-SMITH, it was agreed:—

That a grant of £300 be made towards the expenses of the Irish Branch Council for the current year.

Canadian Practitioners.

Mr. TOMES asked the President, in reference to the suggestion for an amendment of Part II. of the Medical Act, 1886, contained in his address to the Council, whether he could state that that suggestion was likely to be favourably regarded by the Government of the Dominion of Canada or by the medical authorities who had given their adhesion and support to the Canada Medical Act, 1902.

The PRESIDENT: I think the best way to reply to this question is to give a little narrative of the circumstances which led me to make a reference to it in my opening address. It was largely due to the interest one takes in endeavouring to put Canadian medical practitioners on a proper footing as regards our British Medical Register. At last November meeting I dwelt for some time on the Canadian Act so as to show what that Act was to do and to show that if Canada carried out the provisions of that Act there should be reciprocity. But at the end of April or beginning of May Sir John Tuke put into my hands a letter received by him from Dr. Roddick, a member of the Canadian Legislature—the member who carried through this Act—which contained these words:—

You are probably aware that before the Canada Medical Act, 1902, could come into operation it was necessary that all the provinces should consent to the measure. I regret to say that within the last few days the legislature of the province of Quebec rejected the measure by a large majority. This, of course, puts a stop to my work for the present, and unless I succeed in getting an amendment through the Dominion House, of which I am a member, during the present session it is possible that the Act could not come into *operation for many years. I can, therefore, no longer* advise those interested to interfere with General Laurie in his laudable endeavour to assist Colonial graduates to serve the empire in the naval and military and civil services of the Crown.

In view of the fact that Quebec would not give up its independence and come under the general scheme, which made it quite clear that we could not look for several years for Canada being brought into line with, say, Australia, I called attention to the matter. You will observe that General Laurie's Bill proposed the overcoming of the difficulty—that is to say, that the Privy Council might put certain provinces on the basis of reciprocity. That was the matter that went through my mind at the moment and that is the reason why I made the suggestion. The whole question is under the consideration of the home authorities and something must be done because it is manifestly in my judgment most unjust that whilst practitioners coming from Australia can enter easily into the service of the Crown practitioners coming from Canada cannot. To come to the question—I am unable to say whether the suggestion I have made is likely to be favourably regarded.

Sir JOHN TUKE: General Laurie has introduced a revised Bill in which the federation of Australia is taken into account.

The PRESIDENT: Yes; prior to two years ago Australia was treated as three different States and reciprocity was given to each of these three. Now that these States are federated into a great Commonwealth it is a question how far we can recognise reciprocity as between the home country and them. They are Victoria, New South Wales, and South Australia. The question of Canada and Australia must be considered so as to place the subject on a general footing.

Mr. TOMES said that he also had received a letter from Dr. Roddick in which the writer of it stated that he had knowledge of General Laurie's Bills and that letter conveyed rather a different impression from that received by Sir John Tuke. Dr. Roddick pointed out that he would not hinder in the slightest the adoption of General Laurie's scheme, but he should prefer that his own Bill should become operative. He believed also that the Dominion Parliament would assent to his Bill, for five or more provinces had adopted it. All the provinces except Quebec were in favour of it. He (Mr. Tomes) concluded by moving—

That the President be requested to communicate with the proper authorities in order to ascertain whether the suggestion made in his address as to reciprocity for Canada is likely to be favourably regarded by the Government of Canada or by the medical authorities who have given their adhesion and support to the Canada Medical Act, 1902.

Sir VICTOR HORSLEY seconded this motion and the Council agreed to it.

Dental Examination and Education Committee.

On the motion of Mr. TOMES the following report was received and entered on the minutes:—

The committee met on Wednesday, May 27th, 1903.

An Act relating to the practice of dentistry, South Australia, 1902, has been referred to your committee for its information. In this Act all of the dental licences of this country, as well as that of the Dental College of Sydney, are cited as entitling to admission to the Register *and power is given to recognise* such other diplomas as the board may think fit and, subject to the fulfilment of a condition, *that of the* University of Adelaide is added to the list of recognised degrees. The report.

In 1900 an application made by the Royal College of Dental Surgeons of Ontario to the General Medical Council was considered (Minutes 1900, pp. 169, 361-67). In this application it was proposed that
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only refer to the opinion then expressed, to which, the circumstances not having altered, they adhere.

Approval of a Teaching Institution.

The report of the Students' Registration Committee which, on Sir HUGH BEEVOR'S proposal, was received and entered on the minutes, showed that the committee had resolved

That the Polytechnic Institute, Battersea (day classes), be added to the list of recognised institutions approved by the Council.

The Battersea Polytechnic has been adopted as one of the schools for internal students of the University of London.

Officials of the Council.

Dr. MACALISTER moved:—

That the President be requested to express the thanks of the Council to Mr. N. C. King for his services in preparing an index of the Council's minutes (1886–1902).

Sir JOHN BATTY TUKE seconded the motion, which was agreed to.

The PRESIDENT had pleasure in expressing to Mr. King thanks for the work which he had done voluntarily. They were very much obliged to him for the time and labour he had devoted to it.

Dr. MACALISTER moved the re-appointment of Mr. H. E.
or the Council until the close of

express how much he owed to Mr. Allen in connexion with business. It would be impossible for a non-resident President to conduct the affairs of the General Medical Council unless he had the careful and active coöperation which Mr. Allen had invariably given,
value to any opinion that

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Thanks to the President.

Sir CHRISTOPHER NIXON said that he should like to have the privilege of moving a vote of thanks to the President for the way in which he had presided over their deliberations and the extremely efficient way in which he had maintained order amongst the disorderly members, including himself (Sir C. Nixon).

The PRESIDENT could not conceal from himself that the meeting had been a very trying one—he had never attended a meeting which had strained his attention so much as the present—and he thanked them very warmly, not only for this vote of thanks, but also for the consideration with which those disorderly members among whom Sir Christopher Nixon placed himself had met any suggestion made by him.

The Council rose till July 15th.

Medical News.

TRINITY COLLEGE, DUBLIN.—At examinations held at *Trinity term the following* candidates were successful:—

UNIVERSITY OF CAMBRIDGE.—The University lectureship in midwifery, now held by Dr. A. F. Stabb, will be vacant at Christmas. An appointment will be made in the Michaelmas term. Candidates are requested to apply to the Vice-Chancellor before Oct. 20th.—Mr. A. C. Seward, F.R.S., has been reappointed lecturer in botany.—The city *isolation hospitals, Bristol, have been recognised by the* University for purposes of medical study.

PRESENTATION —Mr. George A. Davies, L.S.A., J.P., who has practised in Newport (Mon.) for nearly 30 years, has been presented by his friends and patients with a silver tea kettle, a silver tea service, and a diamond ring upon his leaving Newport.

DONATIONS AND BEQUESTS.—By the will of Mr. William Highfield Jones, of Waverley House, Goldthorn-hill, Wolverhampton, £1000 are left to the Wolverhampton and Staffordshire Hospital.—The trustees of Aston Villa Football Club have presented to the General Hospital, Birmingham, a cheque for £1250, raised by subscriptions, for the endowment of a footballers' bed.

ISOLATION HOSPITAL FOR DAWLISH.—A public meeting, convened by the urban district council, was held at Dawlish on May 28th, under the presidency of Dr. Charles N. Lovely, to consider whether an isolation hospital should be provided from the rates or by voluntary subscriptions. After considerable discussion it was unanimously resolved that the council should be informed that whatever was done should be paid for out of the rates.

THE MEDICAL MAN AND THE BURGLAR.—About 4 A.M. on June 3rd the residence of Mr. W. E. Good, M.R.C.S. Eng., L.R.C.P. Edin., of High-street, Dorchester, Dorset, was entered by a burglar. After ransacking the lower parts of the house the man entered Mr. Good's bedroom and making a slight noise awoke Mr. Good who leaped out of bed and after securing the intruder opened a window and shouted for the police. A constable soon appeared and the man was taken into custody..

DINNER TO DR. G. E. HERMAN.—On June 8th Dr. Herman was entertained at dinner at the Café Royal, Regent-street, London, by his old resident accoucheurs, on the occasion of his retirement from the post of senior obstetric physician to the London Hospital. In the unavoidable absence of Mr. T. Horrocks Openshaw, C.M.G., the chair was taken by Dr. Fenton. In proposing the toast of the evening the chairman eulogised Dr. Herman's valuable work at the London Hospital during the past 27 years and dwelt upon his admirable contributions to obstetrics and gynæcology and the important services which he had rendered to his pupils by his teaching and example. The gathering was most successful, men coming from all parts of the country to show their affection and loyalty to their former chief.

ANNUAL DINNER OF THE WEST LONDON HOSPITAL.—This dinner was held at the Empire Hall of the Trocadero Restaurant, Piccadilly-circus, London, on June 8th. It forms a regular reunion of the staff of the West London Hospital, present and past, of the present and past resident staff, and of the members of the Post-Graduate College established in connexion with the institution. The chairman of the dinner, Dr. J. A. Mansell Moullin, proposed "The West London Hospital, including the Post-Graduate College, and the Past Residents," and Mr. L. A. Bidwell (the dean), in reply, said that the Post-Graduate College was established in 1895 to supply clinical instruction to medical men in practice in the country and in the colonies. There were a large number of medical officers from the navy and army constantly in attendance. Since the establishment of the college no fewer than 600 medical men had been students and since Jan. 1st as many as

166 fresh members had been enrolled. The West London Hospital was the only important general hospital in London where practice and clinical teaching were reserved for qualified men; a special building for the accommodation of post-graduates had been erected in the hospital grounds and a spacious pathological department would be provided. Sir William S. Church, Bart., K.C.B. (President of the Royal College of Physicians of London), in the course of acknowledging the toast of "The Visitors," proposed by Mr. W. Bruce Clarke, said that in listening to the speeches made that night he was struck by the great confidence everyone felt in the future of the hospital, which was perfectly justifiable because all connected with them knew that the hospitals of London with medical schools could not provide post-graduate courses. In conclusion, he warned his hearers that the hospital must not expect such a large contribution as it had received last year from King Edward's Hospital Fund because it was not reasonable to suppose that every year would yield such a "bumper" revenue as the last year had—a forecast that it is to be hoped will prove incorrect.

Parliamentary Intelligence.

HOUSE OF COMMONS.

MONDAY, JUNE 8TH.

The Infected Blankets.

SIR THOMAS DEWAR asked the President of the Local Government Board whether the hospital blankets which reached this country from South Africa as discarded War Office stores had yet been traced in the [illegible]

I sent a circular letter to about 200 sanitary authorities in England and Wales in whose districts it was reported that some of the blankets referred to had been received and advised them as to the measures which should be adopted in order to safeguard the public against any possible infection from the blankets. I have not received reports from all the authorities, but, so far as my information goes, I have every reason to be satisfied with the action taken in matter.

Sir THOMAS DEWAR asked the Secretary of State for War whether he had yet received from the General Officer Commanding in South Africa a report explaining the circumstances in which discarded hospital blankets were sold in South Africa; whether he would state the result of the inquiry, the number of blankets sold, and the amount which they realised; and, in the interest of public health, whether he would consider the expediency of issuing instructions that all stores composed wholly or in part of textile fabrics which had been used in the field, whether in hospital or otherwise, should be carefully disinfected before they passed out of the hands of the military authorities.—Mr. BRODRICK replied: The General Officer Commanding, South Africa, reports that in October last, owing to the rapid demobilisation of the troops, an enormous stock of unwashed general service blankets, returned to store by the troops on demobilisation, was stored at the Cape Town Ordnance Stores, stacked in the open under tarpaulins. Efforts were made to have these washed and properly stored, but meanwhile the stacks took fire by spontaneous combustion and endangered the entire ordnance depôt. Prompt action became imperative and the chief ordnance officer gave instructions for large numbers of those in the worst condition to be destroyed by fire and accepted tenders for the sale of 80,000, provided they were removed within three days. Those blankets were not unserviceable though they had not been washed. The amount realised by the sale was £1495. Medical officers have, under the regulations, power to destroy any articles of public property on sanitary grounds and are expressly ordered to disinfect all soiled bedding which has been in contact with the sick. I am not prepared to issue so wide an order as that suggested —that all textile fabrics which have been used in the field should be [illegible] s previously stated, the ordnance and [illegible] instructions as to the disposal of con- [illegible] I also issued special orders forbidding the sale in South Africa of any textile article which might convey infection. There appears to have been an error of judgment on the part of the responsible officer who had otherwise done excellent service. The military authorities are investigating the matter.

Sir THOMAS DEWAR asked Mr. Brodrick whether he would state the number of discarded military tents which had been sold in South Africa and the amount which they realised; whether they were disinfected and whether were they sold by tender or by public auction; and whether he would also state the number of hospital tents sold and say whether any, and if so what, steps were taken to secure their disinfection.—Mr. BRODRICK replied: About 2760 tents are known to have been sold, of which only four were hospital marquees. They were sold by auction and tender. The amount realised was £970. Under the medical regulations medical officers are authorised to destroy public property on sanitary grounds when necessary and are also in possession of stringent instructions regarding disinfection. I have no reason to suppose these instructions were disregarded.

Imported Milk.

In Committee of Supply on the vote for the Customs Department, Sir EDWARD STRACHEY raised a debate on the question of imported milk and in particular complained that the Customs Department refuses to give information as regards the names and addresses of persons in this country to whom foreign milk is consigned and by whom it is sold. Sir Edward Strachey and other Members contended that purchasers have the right to know where the milk they buy is produced. The reply made on behalf of the Government was to the effect that the Customs Department has no power to give this information and that the proper line of reform is by way of legislation.

TUESDAY, JUNE 9TH.

The Sewage of Longmoor Camp.

Mr. HEYWOOD JOHNSTONE asked the Secretary of State for Wa whether it was the intention of the War Office to drain the camp at Longmoor into a brook which is a confluent of the river Rother, and if so, whether he would state what precautions would be taken to render the discharge of sewage into that brook innocuous before it reached the Rother; and whether, before any scheme was sanctioned for the disposal of the sewage from this camp the opinion of the Local Government Board would be taken as to the suitability of the scheme and as to how far it might fulfil the requirements which it imposed upon local authorities who had to provide for the disposal of sewage.—Mr. BRODRICK replied: It is no contemplate [illegible] into any brook o river. The [illegible] ment on approved principles a [illegible] d, be subjected to land treatment in accordance with [illegible] Government Board.

Appointments.

Successful applicants for Va [illegible] Public Institutions and others possessing [illegible] this column, are invited to forward to [illegible] ected to the Sub Editor, not later than 9 [illegible] morning of each week, such information for gratuitous publication.

BALDWIN, G. P., L.R.C.P. & S. Edin., has been appointed a Member o the Military Pension Board, New Zealand.

BEAUMONT, PERCIVAL, M.B. Cantab., has been appointed Physician t the Essex and Colchester General Hospital.

COPLANS, MYER, M.B. Lond., has been appointed Resident Medical Officer to the North-West Lond [illegible] Kentish Town road, N

EATON, OLIVER, L.R.C.P. Lond., [illegible] s been re-appointed Medical Officer of [illegible]

FLECK, DAVID, M.B., B.Ch., B.A.O. [illegible] appointe Resident Superintendent to the Royal Victoria Homes at Brentry near Bristol.

HARRISON, W. A., M.B., Ch.M. Edin., has been appointed Acting District Medical Officer, Williams, Western Australia, during th absence on leave of Dr. Roughan.

HAYWARD, WILLIAM THORNBOROUGH, M.R.C.S., has been appointe on the Board of Management of the Adelaide Hospital, South Australia.

HILL, ALFRED WILLIAM, M.D. Brux., has bee [illegible] of Management of the Adelaide Hospita [illegible]

ICK, T. E., M.B. Melb., has been appointed [illegible] Hill, Western Australia.

KING, F. W. R. J., M.R.C.S., L.R.C.P. Lond., has been appointed Member of the Military Pension Board, New Zealand.

MORRIS, M. E. H., M.B. Lond., has been appointed House Surgeon t the North Devon Infirmary, Barnstaple, vice Mr. R. Cook resigned.

PENBERTHY, WILLIAM, L.R. [illegible] has been appointe Medical Officer, Public [illegible] Deaths for the Wivelisco [illegible] Board of Guardians, vice [illegible]

ROGERS, RICHARD SANDERS, [illegible] on the Board of Management [illegible] Australia.

SHEPHERD, ARTHUR EDMUND, L.R.C.P., L.R.C.S. Edin., has bee appointed Honorary Gynæcologist, Adelaide Hospital, Sout Australia.

SMITH, JOHN CARMICHAEL, L.R.C.P. & S. Edin., has been appointe Public Vaccinator at Taihape, New Zealand.

TELFORD, E. D., B.C. Cantab., F.R.C.S. Eng., has been appointe Resident Surgical Officer at the Manchester Royal Infirmary, vic Charles Roberts, M.B. Lond., F.R.C.S. Eng., whose period o appointment has expired.

THOMPSON, JAMES, M.B., Ch.B. Melb., has been appointed Actin District Medical Officer at Busselton, Acting Quarantine Offic for the port of Busselton, and Acting Public Vaccinator for th Urban and Suburban Districts of Busselton and Rural District o Sussex, [illegible]

WACE, R. I. [illegible] has been appointed a Visitin Justice t [illegible] estern Australia.

Vacancies.

For further information regarding each vacancy reference should b made to the advertisement (see Index).

AYLESBURY, ROYAL [illegible] HOSPITAL.—Resident Surgeon unmarried. Sal [illegible] d and apartments

BECKETT HOSPITAL, [illegible] House Surgeon Salary £100, with board, lodging, and washing.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Male House Surgeon Salary £80 per annum, with board and washing.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES, John Bright-street, Birmingham.—Clinical Assistant Honorarium at rate of 52 guineas per annum.

BIRMINGHAM GENERAL DISPENSARY.—Resident Locums. Term 4 guineas per week, with apartments.

BRISTOL GENERAL HOSPITAL.—Surgeon, also Assistant Surgeon.

CHESTER GENERAL INFIRMARY.—House Physician. Salary £90 pe annum, with residence and maintenance.

CROYDON MENTAL HOSPITAL, Warlingham, Surrey.—Senior Assistan Medical Officer. Salary £160 per annum, rising to £180 per annum with apartments, board, and washing.

DUDLEY GUEST HOSPITAL.—Assistant House Surgeon, for six months Salary £40 per annum, with residence, board, and washing.

EVELINA HOSPITAL FOR CHILDREN, Southwark, S.E.—Four Clinical Assistants.

GUARDIANS OF THE POOR OF ST. MARY, ISLINGTON.—Medical Officer and Public Vaccinator for No. 1 District. Salary £100 per annum, with fees.

ISLE OF WIGHT COUNTY HOSPITAL, Ryde.—Resident House Surgeon. Salary £90 per annum.

KENT AND CANTERBURY HOSPITAL.—House Surgeon, unmarried. Salary £90 a year, with board and lodging.

LIVERPOOL EYE AND EAR INFIRMARY.—House Surgeon. Salary £80,

0

8, Hunter-street, Brunswick-square, W.C.—Second Demonstrator of Anatomy.

MONKWEARMOUTH AND SOUTHWICK HOSPITAL, Sunderland.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

METROPOLITAN ASYLUMS BOARD ASYLUM, Caterham, Surrey.—Male Assistant Medical Officer, unmarried. Salary £180 per annum, rising to £200, with rations, lodging, attendance, and washing.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary £160.

with board and washing.

UNIVERSITY COLLEGE, London.—Assistant Physician.

WARRINGTON INFIRMARY AND DISPENSARY.—Senior Resident House Surgeon, unmarried. Salary £120 per annum, with residence and board.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House Surgeon. Salary £50 per annum, with board, lodging, washing, and attendance.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician,

WIG Y AND DISPENSARY.— board, apartments, and washing.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary £120 a year, with board, lodging, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

Australia.

quare, W.,

W. Thyne,

M.A., M.D., of a son.

MARRIAGES.

BURFIELD—GLENNY.—On June 4th, at the parish church, Barking, by the Rev. F. Clyde Harvey, vicar of Hailsham, assisted by the Rev. W. J. Clay, vicar of Bisley, Gloucester, and the Rev. P. M. Wathen, vicar of the parish, Thomas Burfield, [illegible] eldest son of Joseph Burfield

d, 1903, at St. George's Church,
v. F. G. Saint, M.A., of St. Luke's,
Wilfred Pearson, M.R.C.S. Eng., L.R.C.P. Lond., third son of Wm. Pearson, of Fawley, Bradford-road, Wakefield, Yorks, to Emily, daughter of the late James Eighleen, of Hadleigh, Suffolk.

DEATHS

CAUDLE.—On June 1st, at Millbrook Lodge, Millbrook, Adolphus William Wisden Caudle, M.R.C.S. and L.S.A., of Henfield, Sussex, in his 63rd year.

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N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

PROBABLE NATURE AND LIFE CYCLE OF THE YELLOW FEVER GERM.

DR. CARLOS FINLAY, chief sanitary officer of Cuba, has published in

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He

the

non-immune human being and the other a species of mosquito, and concludes that the germ, like that of malaria, must be a protozoon and not a bacterium. He is led also by analogy to infer that the germ of yellow fever goes through phases of development similar to those of the malaria parasite. He endeavours to show that while the human subject is rightly considered as the permanent host for the germ of malaria it is the stegomyia mosquito which acts the part of a permanent host for the yellow fever germ, the short sojourn of which in the body of the yellow fever patient is such as might be expected of a parasite going through phases of sexual reproduction in the body of its intermediate host. Comparing the known facts regarding the clinical history, etiology, and epidemiology of yellow fever, the striking circumstance is not the parallelism but rather the contrast between the course of events in malaria and in yellow fever. He states the following practical deductions as the outcome of the views expressed in the paper.—

1. The yellow fever germ being the parasite of a small insect must be a much smaller protozoon than the malaria germ which is a parasite of man.

2. The reality of ultra microscopic germs as promoters of human infectious diseases having now been scientifically demonstrated, it is possible that the germ of yellow fever may be one of that class.

3. For other infectious diseases the germs of which have escaped detection it may be surmised that the germs are, or at one time were, parasites of a very diminutive insect host which either continues unsuspected or may have become extinct.

4. The sojourn of the yellow fever germ in the human body is of short duration, in accordance with its object, which is mainly to secure the preservation of the species by sexual reproduction.

5 The function of sexual reproduction is accompanied by the elaboration of powerful toxins to which must be directly attributed the attack of yellow fever.

6. Apart from the elimination or destruction of the mosquitoes our main reliance for the prophylaxis of yellow fever and malaria should consist in preventing the transfer of the parasite from the intermediate host to the permanent one; this is comparatively easy in yellow fever but for malaria presents almost insurmount-

In the same publication (*Revista de Medicina Tropical*) Dr. Juan Guiteras, professor of pathology and tropical medicine in the University of Havana, contributes a paper on the Duration of Life of *the Stegomyia* Fasciata or Yellow Fever Mosquito. He says that as this insect retains its infectivity during all its life the facts which refer to the duration of its life are of great interest. From an experiment made at the laboratory it appears that of 11 mosquitoes hatched on August 1st, 1902, which were made to bite on the 5th of the same month a patient with yellow fever no less than five mosquitoes lived over 100 days and one as long as 154 days. These mosquitoes were preserved in a wide-mouthed *glass jar covered* with gauze; inside the jar were placed a glass of water, some grass, and a lump of sugar. Dr. Finlay and others have proved that the life of the mosquito is short (a few days only) if it is deprived of water, but Dr. Guiteras thought that in a state of hibernation the insects could perhaps live without water. He therefore retained in a wire gauze cage 33 female stegomyiæ without water, grass, or sugar. They were placed in an ice-box having a temperature between 8° and 10° C. 45 days later 16 mosquitoes survived and at the eighty seventh day three were still living. The same writer has made some *observations on the Shiga Bacillus* and Secondary Infections in Yellow Fever. In one case of yellow fever, on the fifth day of the disease a decided agglutination of the Shiga bacillus (belonging to the group of hæmorrhagic bacteria) was obtained in 20 minutes with dilutions of 1 in 50. The patient died on the *fourteenth* day and continued to the end to give the Shiga reaction and to show hæmorrhagic symptoms. Dr. Guiteras suggests that it is possible that this secondary infection may account for some of the symptoms of the disease, such as the hæmorrhages and the remissions of the fever.

A REFLECTING CRYPTOSCOPIC "CAMERA" FOR X-RAY WORK.

IN the New York *Electrical Review* of May 23rd Mr. William Rollins publishes a copiously illustrated article on some pieces of apparatus which he calls "*reflecting* cryptoscopic cameras." He states that he described the first reflecting cryptoscope and the first cryptoscopic camera in the *International Dental Journal* for July, 1896. In the present article he gives an account of two forms of this instrument, one of them being intended for examination of the feet and the other for examination of the body of a person in the horizontal position. The first of these somewhat resembles an ordinary portable writing-desk the slope of which rises more rapidly than usual. A photographic plate-holder and a fluorescent screen can be held against the under side of the slope, the plate-holder being always above the screen. A horizontal mirror lies on the bottom of the camera face upwards, so that when a foot is placed on the slope and a source of x rays is brought over it, an observer looking downwards through the side of the camera into the mirror sees the image of the foot displayed on the screen, and in this way, before placing a sensitised plate in the plate-holder, he can move the foot as may be required and can also arrange the position and direction of the light. During the exposure of the plate it may be useful to view the image produced on the screen by the rays which have traversed the plate. The other camera is hung on side rails attached to the table on which the person to be examined is lying in the horizontal position. It can, therefore, be slid under the table to any required point and the observer looking downwards into the mirror sees on the screen the image of any part which is to be inspected. The plate-holder with the sensitised plate is then introduced above the screen as before.

THE SURGEON AND THE CARPENTER.

(*With due apologies.*)

THE following lines have been sent to us as suggested by an address recently printed in our columns:—

The Surgeon-and-the-Carpenter
  Was walking down the Strand
(The Surgeon and the Carpenter
  Are one, you understand;
The Surgeon is the master Mind,
  The Carpenter's the Hand).

"If things go on at such a pace,"
  I heard the Surgeon say,
"Each member of the human race
  Will meet the knife some day:
A terrible catastrophe."
  The Carpenter said "Nay."

"At present, too," the Surgeon said,
  "Physicians are so proud,
To back my own opinion
  I scarcely am allowed;
Yet mine, perhaps, is worth as much
  As any of the crowd.

"They seem to think," he hurried on,
  "That I am only you,
And that they have a right to say
  What I have got to do;
That they design the Surgeon's work
  And we just 'put it through.'

Now, when you reach a certain stage,"
  He further made remark,
"You grow incomparably sage"—
  "Excuse me, here's the park,"
The Carpenter observed, "and see
  It's very nearly dark."

The Public, who was looking on,
  Meandered home to tea,
It talked about the Surgeon's words
  And what he meant to be;
And said, "If he's no Carpenter,
  What use is he to me?"

WANTED—A HOME.

To the Editors of THE LANCET.

SIRS,—I should be much obliged if any reader could recommend a peaceful home for a lady suffering from naso orbital sarcoma. The home should be very comfortable and situated in beautiful country surroundings with large private grounds so that the patient could take carriage exercise unobserved in the grounds. Kent would be preferred, but any part within a few miles of Chatham would do. Accommodation would also be necessary for the nurse. The relatives would like to find lodgings or an hotel close to the home so as to be able to be with the patient all day.

I am, Sirs, yours faithfully,

June 5th, 1903. A. G.

"H. V. M." would like to know if there is any home for epileptics for the very poor unable to pay more than 2*s.* or 3*s.* weekly.

THE GENERAL MEDICAL COUNCIL AND THE SOCIETY OF APOTHECARIES.

To the Editors of THE LANCET.

SIRS,—In your account of the proceedings of the General Medical Council on May 23rd, reported in THE LANCET of May 30th, p. 1559, Mr. Brown is reported as saying, regarding the Society of Apothecaries, that "it was its statutory duty to provide qualified dispensers for medical men, but this had not been done," &c. Now, the society does provide qualified dispensers, but so many medical men employ *un*qualified dispensers (no doubt because they are cheaper) that we who are qualified find it difficult to obtain posts at 30*s.* per week.

I am, Sirs, yours faithfully,

June 7th, 1903. QUALIFIED DISPENSER.

⁂ Of late years some 300 candidates per annum have presente themselves before the London Society of Apothecaries for examina tion certificates as dispensers. Of these about one-half are foun worthy to receive the certificates. The future of these assistants is so far as we know, as dispensers to medical men, to hospitals, or t public infirmaries, and they find little or no difficulty, as a rule we believe, in obtaining employment.—ED. L.

HYPNOTISM FOR INEBRIETY.

A CORRESPONDENT writes to ask us if any of our readers can supply hi with any information as to the results of hypnotic suggestion in th treatment of inebriety and where such treatment could be unde gone. Will any of our readers who can help our correspondent kindl do so?

◆

An Inquirer.—It is impossible to give any very definite answer to o correspondent on the information supplied. If he will consult o advertisement columns he will be able to form a fair idea of what usually offered.

R. H.—The exaggerated renal action cannot be taken as evidence favour of the sample. Several "all malt" whiskies have recent been analysed in our laboratories and their claims will be fu reported upon in our columns.

Physician.—A reference to our advertising columns will show that t season is from May 1st to Oct. 1st.

COMMUNICATIONS not noticed in our present issue will receive attenti in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), S Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-squa (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Lond Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (16th).—London (2 P.M.), [illegible] (1.30 P.M.), Thomas's (3.30 P.M.), Guy's (1.30 [illegible] We minster (2 P.M.), West London [illegible] Coll (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mar (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.) London Thr (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M Throat Golden-square (9.30 A.M.), Soho-square (2 P.M.)

WEDNESDAY (17th).—St. Bartholomew's (1.30 P.M.), University Coll (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cr (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's Coll (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samarit (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt North Central (2.30 P.M.), Westminster (2 P.M.) Metropolitan (2.30 P.M London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden squ (9.30 A.M.), Guy's (1.30 P.M).

THURSDAY (18th).—St. Bartholomew's (1.30 P.M.), St. Thom (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middle (1.30 P.M.), St. Mary's (2.30 P.M.), Soho square (2 P.M.), North W London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæ logical, 2.3[illegible] London Thro (9.30 A.M.), [illegible] M. and 2.30 P.M Throat, Gol[illegible]

FRIDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Char Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mar (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Northern Central (2.30 P.M.), West London (2.30 P.M.), Lond Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Thro Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho squ (2 P.M.).

SATURDAY (20th).—Royal Free (9 A.M.), London (2 P.M.), Middles (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthal (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and Central London Ophthalmic Hospitals operations are performed daily

SOCIETIES.

TUESDAY (16th).—OBSTETRICAL SOCIETY OF LONDON (20, Hanov square, W.).—8 P.M. Adjourned Discussion on Chorion Epithelio (opened by Dr. Galabin). The following gentlemen have intimat their intention to take part in the discussion—Dr. H. Spenc

WE

And other papers.

FRIDAY (19th).—ANATOMICAL SOCIETY OF GREAT BRITAIN AND

Bryce.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MO COLLEGE AND POLYCLINIC Dr. J. F. Payne: Clinique Acid as a Cause of Circulation

POST GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. A. Saunders: Examination of the Stomach and Gastric Contents.

TUESDAY (16th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. Taylor: Clinique. cid as a Cause of Anæmia

Hospital, Hammersmith- Immediate and Remote

AND EPILEPTIC (Queen- Russell: Diseases of

Cerebellum.

London Hospital, Hammersmith- Uterine Hæmorrhage.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Horton Smith: Cases of Arrested Pulmonary Tuberculosis.

THURSDAY (18th).— POLYCLINIC

the Doctrine of Immunity. (Gordon Lecture.)

FRIDAY (19th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. D. Grant: Clinique (Ear.) 5.15 P.M. Col. K. MacLeod: The Physical Requirements of

ital, Hammersmith-

sity of London) (New Diseases in India

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 11th, 1903.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo	Maximum Temp. Shade.	Min. Temp.	Wet Bulb	Dry Bulb	Remarks at 8.30 a.m.
June 5	30·30	N.E.	..	125	69	64	57	65	Fine
" 6	30·35	N.E.	...	114	63	62	60	66	Cloudy
" 7	30·30	N.E.	...	91	60	50	50	55	Overcast
" 8	30·16	E.	...	120	67	50	52	60	Cloudy
" 9	29·77	E.	0·53	112	67	62	64	65	Overcast
" 10	29·77	S.W.	0·33	77	61	55	57	58	Raining
" 11	29·80	N.E.	0·56	60	57	55	55	56	Overcast

During the week marked copies of the following newspapers have been received: *Highland News, Western Daily Press, Evening Leader (Newcastle), Referee, Derbyshire Courier, Derbyshire Times, Reading Mercury, Herts Advertiser, Times of India, Aberdeen Weekly Free Press, Daily Mail, South Wales Echo, Westminster Gazette, Dublin Daily Independent, Dublin Express, Margate and Ramsgate Gazette, Yorkshire Post, Hertfordshire Mercury, Exeter Express, Burnley Express, Dublin Evening Telegraph, Echo, Bradford Observer, Daily Express, Globe, Lincoln Herald, Windsor and Eton Express, &c.*

Communications, Letters, &c., have been received from—

A.—Mr. G. T. Arnold, Torquay; Mr. W. F. Abbott, Folkestone; Messrs. Allen and Hanburys, Lond.; *Archives de Thérapeutique*, Paris; A. S. R.; A. M. D.; Dr. H. Adamson, Beechworth, Australia; A. G.; Apollinaris Co., Lond.

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The Croonian Lectures

ON

MUSCULAR MOVEMENTS AND THEIR REPRESENTATION IN THE CENTRAL NERVOUS SYSTEM.

Delivered before the Royal College of Physicians of London

BY CHARLES E. BEEVOR, M.D.,
F.R.C.P. LOND.,
PHYSICIAN TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC AND THE GREAT NORTHERN HOSPITAL.

LECTURE I.

Delivered on June 9th.

MR PRESIDENT AND GENTLEMEN,—I have first to express to you, Sir, and to the Council of this College, my most sincere thanks for the great honour which you have conferred on me in selecting me to deliver the Croonian lectures. I feel very deeply the responsibility of undertaking this duty and when I regard the roll of distinguished Fellows who have preceded me, my task is indeed difficult, and though I fear that I shall not attain the higher standard which they have set, my endeavour will be to lay before you to the best of my ability some investigations on muscular movements on which I have been working for some years. The choice of my subject will also, I think, be in harmony with the wishes of the founder of these lectures, for while the Croonian lectures at this College are directed to be given on one or more subjects in anatomy, physiology, and pathology, with a view to the prevention, control, and cure of disease, the Croonian lecture to be delivered annually before the Royal Society is required to be on the nature and laws of muscular motion. So that we may infer that the founder himself took a great interest in the muscular system.

In taking the subject of muscular movements the first question which would naturally arise is: Which is the best method to ascertain the action of a muscle? To determine the action of a muscle there are three chief methods—first, the anatomical method, which is employed on the dead subject and consists in dissecting out a muscle, freeing it from its connexions, but leaving it attached at its origin and insertion. The muscle is then pulled upon by the dissector and the resultant position of the limb is taken to show the action which the muscle would exercise during life. Or a muscle is seen to have a certain origin and insertion, so that if it contracted it must produce an approximation of the two parts. As an instance of this may be mentioned the inspiratory action of the latissimus dorsi muscle which from its origin from the lowest three or four ribs and its insertion into the humerus has been looked upon as a muscle of forced inspiration, for it was concluded that if when the humerus was fixed the muscle contracted its only action would be to elevate the ribs, whereas its chief aim is expiratory, as we shall see later. This—which I have called the anatomical method—is the only means which we have of obtaining knowledge of the action of muscles too deeply seated to be examined during life, such as the quadratus lumborum and the external rotators of the hip-joint It has, however, the following great disadvantages. It gives the action of the individual muscle and thereby leads one to imagine that this particular muscle acts by itself. It gives all the possible actions of a muscle and postulates that in all these possible actions the muscle must take part. With regard to these objections I think that there is hardly an instance in the whole body of a movement in which only one muscle takes part and it would therefore be necessary to know the particular share of the other muscles in the movement and the manner in which they affect the action of the muscle under consideration. It does not follow because a certain movement can be produced on a joint by traction on the dissected muscle that therefore the muscle must be used during life for this movement, as it may not be advantageous to use the muscle for this purpose.

The second, or electrical method, is the one which was employed by Duchenne with such great success and his classical observations on the actions of muscles will always rank as one of the most brilliant achievements in the subject. The method consists in faradising with the two poles of an induction coil the muscle under examination and then noting the action produced on the joint or joints over which the muscle acts. The results of this method have given most valuable information as to the action of the muscles, and where the muscles are superficial enough to be reached by the current this method is much preferable to the anatomical method in that the movements are produced by the living muscle undisturbed in its relation to surrounding parts. I venture to think, however, that this method is open to the same objections as the anatomical method in that although every movement that the muscle is capable of is undoubtedly produced, yet as the muscle does not act alone we do not know what the influence of the other muscles may be which also enter into the movement, and also there is the second objection that we do not know by this method whether a muscle which on stimulation gives the movement, let us say, of supination is included in the movement of supination, when this is performed as a voluntary act.

It seems to me that although these two methods will tell us what a muscle may do it does not tell us what a muscle does do, and we cannot say for certain that a muscle has a definite action without following the precept of the immortal Harvey, and going direct to nature and there testing the results obtained by the anatomical and electrical methods. This last method, which we call the physiological or natural method, differs from the first two in reversing the order of procedure. In the anatomical and the electrical methods one muscle is taken and by dragging on it or stimulating it to contract certain movements are produced; whereas in the physiological method a living person is told to perform a definite movement and it is then observed which muscles take part in this movement.

Certain precautions have to be taken in using this method, the most important being that the person shall perform by fixation of the limb the movement only which is required, so that, for example, if a person is told to pronate the forearm he must not at the same time abduct the shoulder and thereby bring into action other muscles than those concerned directly with pronation. The means which I have used for determining whether a muscle is taking part in any given movement are inspection and palpation either of the muscle as a whole or of its tendon. I have examined both normal people and patients who have lost the use of some of their muscles. The movements have been performed in three ways: (1) by moving the limb only without any extra weight; (2) by moving the limb loaded with different weights; and (3) by attempting to move the limb which is fixed by an opposing force. The first procedure gives the minimum work which the muscles entering into any movement are called upon to do. The least possible work that a group of muscles can do is to overcome the inertia of a joint. This can be accomplished in the elbow by placing the upper arm on a support in a horizontal position and then flexing or extending the forearm on it in a horizontal plane; by this means the action of gravity can be neutralised. Or with the upper arm resting horizontally the forearm can be placed vertically and the movements of pronation and supination can be carried out. The next degree of work is that afforded by lifting the limb against gravity, as in flexing the forearm when the humerus is in the vertical position alongside the trunk. The third procedure gives the greatest work that the muscles can perform and as by reason of the fixation of the limb there is no alteration in the angle of the joint the error is avoided of assuming that the tightening of a tendon from the stretching of a passive muscle is evidence of contraction of the muscle. The second method would give the intermediate conditions between the two extremes of maximum and minimum work. The amount of work done by the muscles was measured by spring balances or by the traction scale of a clinical dynamometer.

With the exception of Winslow[1] and Duchenne I am unable to find that writers on anatomy as a rule take their knowledge of the action of muscles from the living subject. James Benignus Winslow, whom Duchenne rightly styles the "Admirable Winslow," and who, although his name has an English sound, was professor of physic, anatomy, and surgery in the University of Paris in the eighteenth century, speaks with no uncertain note when he writes that "the Experiments made on dead Bodies, by pulling the muscles after they have been raised, are very fallacious." There are lists of muscles which are given under the different heads of flexors, extensors, rotators, abductors, adductors, &c., but how are these lists obtained? They are made by putting into one category, for instance, all the single muscles which are labeled flexors, &c., and such a list does not express a combination which has been verified by actual inspection during life. I venture to think that, if all the muscles contained in some of these lists contracted the movement produced would not be the one which is expected and I trust to be able to show that the actions which are ascribed to some of the muscles cannot be substantiated when put to what I think will be admitted to be the only true test—their actions in the living subject. In examining a case of muscular atrophy the chief difficulty consists of knowing what movements to ask the patient to perform in order to find out whether a particular muscle is acting or not. I trust that the time will come when the actions of muscles will be taught on the living subject together with the part which they take in the performance of simple movements.

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[1] An Anatomical Exposition of the Structure of the Human Body, by James Benignus Winslow. Translated from the French original by G Douglas, M D. Fourth edition, corrected. 17[illegible].

I now propose to take the movements of some of the joints of the body and to describe the muscles which take part in producing the movements as observed in the living subject. For convenience I shall begin with the movements of the upper limb. I shall use in all cases the Latin names for the muscles and I would like here briefly to express my regret in these days, when the idea of a universal language is so much discussed, that in anatomy so many nations prefer to use the vernacular instead of the Latin name which is intelligible to everyone. For instance, the serratus magnus is described in foreign modern anatomical works as the "grand dentelé" and the "vorderer Sägemuskel," and when we come to the anatomy of the brain the corpus geniculatum externum becomes the "corps genouillé" in French and the "äusserer Kniehöcker" in German. I am glad to say that in this country we have not followed this practice and that we do not talk as yet of the "front saw muscle" or the "outer knee-knob." It would save much trouble if every nation adopted the Latin terms, a decision which I believe the International Nomenclature Committee has arrived at.

Taking some of the movements of the upper limb, and beginning with those of the fingers, I would remind you that the first phalanges of the fingers are flexed on the metacarpal bones by the interossei and lumbricales, an anatomical discovery which was made by Columbus and Fallopius in 1559 and 1561 and which, according to Duchenne, was lost sight of till he (Duchenne) again called attention to it, but this is hardly correct as it was already mentioned by Winslow,[2] and John Hunter[3] refers to it in his Croonian lecture delivered before the Royal Society in 1777. The first phalanges are also flexed by the tendons of the flexores digitorum on their way to the terminal digits. If, however, it is required to flex the last two phalanges of each digit, but not the first, the extensor communis digitorum is brought into action—a muscle which extends the first phalanx more than the last two phalanges. If the movement of flexion of the fingers is required without any movement of the wrist, then along with the flexores digitorum the extensores carpi radialis longior and brevior and ulnaris contract.

The extension of the second and third phalanges is, as is well known, produced by the two sets of muscles, the extensor communis digitorum and the interossei and lumbricales which are inserted into the common extensor tendons. The action, therefore, of these small muscles is to flex the first phalanx and to extend the second and third phalanges. Duchenne[4] is strongly in favour of the theory that the action of the extensor communis digitorum on the last phalanges is exceedingly limited and that it is not an extensor of all the phalanges but that it only has a true action on the first phalanx and he proposes to call it the extensor of the first phalanx. He also states in another part of his book, "Physiologie des Mouvements," that the interossei and lumbricales are in reality the sole extensors of the last two phalanges and the sole flexors of the first phalanx. It is no doubt true that when the extensor digitorum is paralysed the last two phalanges can be extended by the interossei and lumbricales and also that in the "claw-hand" there is inability to extend the last digits when these small muscles are paralysed. In the latter case if the first phalanges be kept passively flexed on the metacarpus, then the person is able to extend the terminal digits, so that it seems probable that the inability of the extensor digitorum to extend the terminal phalanges is due to its energy being expended on the first phalanges which are not prevented from extending by the interossei and lumbricales which are now paralysed.

The extension of the proximal phalanges on the metacarpus by the extensor communis digitorum is accompanied, as Duchenne[5] pointed out, by contraction of the flexors of the carpus—viz., the flexores carpi radialis and ulnaris and palmaris longus. In lead poisoning where there is paralysis of the extensor communis digitorum and not of the extensores carpi the patient can, if he keeps his fingers flexed, extend the hand on the forearm, but if he wishes to extend his fingers, his first phalanges remain immoveable and his hand is flexed on the forearm with as much energy as he makes in his greatest effort to obtain extension of the fingers. The explanation of this combination will be discussed later when we consider the synergic action of muscles.

The lateral movements of the fingers are adduction toward the middle finger and abduction away from the line of the middle finger. Adduction is performed by the palmar interossei and abduction of the three large fingers by the dorsal interossei, but with abduction of the index finger and the little finger other muscles come into action. It is exceedingly difficult to abduct the index finger without adducting or flexing the thumb, from the fact that the first dorsal interosseus or abductor indicis arises from the metacarpal bone of the thumb as well as from that of the index finger, so that if it is required to abduct the index finger alone the extensores ossis metacarpi and primi internodii of the thumb are called into action to prevent the thumb moving. Abduction of the little finger is performed by the special abductor minimi digiti, but as this arises from the pisiform bone this latter has to be fixed by the flexor carpi ulnaris. To obviate the special action of the flexor carpi ulnaris on the wrist the extensor ossis metacarpi pollicis contracts and when the hand is in a line with the forearm it is apparently impossible to abduct the little finger without the extensor ossis metacarpi contracting; if, however, the hand be first adducted to the ulnar side the contraction is less marked.

The movements of the thumb are flexion and extension and take place in a plane parallel to the palm of the hand, of all three joints of the thumb, and also abduction and adduction of the metacarpo-carpal joint in a plane at right angles to the one just mentioned. In addition there is opposition of the thumb to the fingers. Now with regard to the movements of the first metacarpus on the carpus, in the movements of flexion and extension which take place in a plane parallel to that of the palm of the hand the palmar surface of the thumb is at right angles to the palm of the hand, but in the movement of abduction it seems to me that it is difficult to perform this movement without rotating the thumb inward so that the palmar surface of the thumb is opposed to that of the fingers. Therefore in abducting the thumb it passes naturally into the position of opposition and from that position it can be advanced towards the tips of the fingers in succession, but more rotation will be required to oppose it to the index finger than to the fourth finger. Taking the terminal phalangeal joint of the thumb first, flexion, as is well known, is performed by the flexor longus pollicis and if this movement alone be required the extensor primi internodii contracts to prevent the first phalanx being flexed on the metacarpus. Extension of the last phalanx is performed by the extensor secundi internodii pollicis, but, as was pointed out by Duchenne, this simple movement cannot be performed without also calling in the action of the abductor pollicis, the flexor brevis pollicis, and the adductor pollicis, as these small muscles send prolongations to the tendon of the extensor secundi internodii (Sabatier, Bouvier, and Duchenne), so that by the action of these small muscles the last phalanx can be extended without extending the first phalanx.

The movements of the metacarpo-carpal joint of the thumb are more complicated and besides flexion and extension there is opposition. Flexion of the metacarpal bone of the thumb is caused by the opponens pollicis and by the abductor flexor brevis and adductores pollicis, transversus and obliquus as they are now called, when flexion of the first phalanx is also required, but when flexion of the metacarpal bone is required with extension of the phalanges there is also some action of the extensor primi internodii pollicis. Flexion of the metacarpal bone is also effected by the flexor longus pollicis after the metacarpal joints are flexed. Extension of the metacarpal bone is performed by the extensor ossis metacarpi and also by the extensor primi internodii. At the same time, as was pointed out by Duchenne, it is not possible to extend the metacarpal bone and the first phalanx of the thumb without putting into action the extensor carpi ulnaris and also, I would add, the flexor carpi ulnaris, which, however, does not come into action so soon as the extensor. The reason why these muscles are brought in will be discussed later; at present I would lay stress on the impossibility of extending the thumb without putting these other two muscles into action and also that this action occurs in all positions of the wrist even when it is in that of extreme abduction, a position in which it would not be possible for the extensor ossis metacarpi to move the wrist further in the direction of abduction.

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[2] Loc. cit., vol. i., sect. iii., No. 966.

[3] The Works of John Hunter, F.R.S., 1837.

[4] Physiologie des Mouvements, 1867, p. 164.

[5] Loc. cit., §§ 168, 169.

Abduction of the thumb is performed by the small thumb muscles—viz., the abductor pollicis, opponens pollicis, and outer head of the flexor brevis, and also by the extensor ossis metacarpi and primi internodii. This is not in accordance with Duchenne[6] who from electrical observations states that the extensor ossis metacarpi is one of the opposing muscles of the thumb and not its abductor, while the extensor primi internodii is not an extensor of the first metacarpal but is the only direct abductor. If by abduction is meant carrying the thumb away from the first finger in a plane at right angles to the palm I think that there is no doubt that the tendons of both these two extensors of the thumb can be felt to contract. There is one important point with regard to this movement and that is that though it is possible to abduct the thumb when the extensors of the thumb are paralysed it is quite impossible for the extensors of the thumb to abduct in the slightest degree when the small thumb muscles are paralysed; in fact, inability to abduct the thumb is one of the best tests for the absence of the small muscles of the thumb. In adduction of the thumb from the position of abduction it rotates from within outwards and this movement is performed by the adductor transversus and probably the obliquus and by the extensor secundi internodii, as shown by Duchenne. When, however, the thumb has passed the middle point of its movement I find that the flexor carpi ulnaris also contracts, probably to counteract the extension of the wrist by the extensor secundi internodii. Opposition is best performed after abducting the thumb and from that position advancing it to meet the fingers; the muscles which take part in this movement are the abductor pollicis, the opponens pollicis, the flexor brevis, and the adductores pollicis. According to Duchenne[7] the abductor chiefly opposes the thumb to the first two fingers and the flexor brevis to all the fingers, while he also includes the extensor ossis metacarpi, which, according to him, is one of the chief opposers of the metacarpal bone and not its abductor; but it seems to me that although it does act in abducting the thumb and putting it in the position of opposition it ceases to act as soon as any resistance is made to the opposition. The movement of opposition is therefore preserved when the extensor ossis metacarpi is paralysed and lost when the thenar muscles are paralysed. It is interesting to note that Duchenne[8] from electrical observations ascribes to the adductor pollicis four different movements on the metacarpal bone of the thumb—viz., adduction, abduction, extension, and flexion. With this I am not able to agree as I cannot find that the muscle takes part in abduction or extension in any position of the bone and I think it is an instance where the actions obtained by electrical stimulation of a muscle do not find their counterpart in the voluntary movements in the living It postulates that a muscle may act as a primary in two movements which are diametrically opposed t other, a condition which I believe does not exist in the human body and which I shall refer to later.

We have next to consider the combined movements of the fingers and thumb, as in grasping an object. Here all the muscles which flex the different joints of the fingers and thumb come into action and in addition to these muscles the extensors of the wrist take part in the action just as they take part in that of flexion of the first phalanges of the fingers. This combination was definitely pointed out by Duchenne[9] who stated "that the synergic action of the extensors of the wrist is absolutely necessary to the flexion of the fingers and the force of their contraction is then proportional to the energy of this flexion."

The movements of the wrist are flexion, extension, radial lateral movement or abduction, and ulnar lateral movement or adduction. In addition to the definite flexors of the wrist—viz., flexor carpi radialis, flexor carpi ulnaris, and palmaris longus—the flexors of the fingers become also flexors of the wrist, but this depends on where the resistance is made. If the resistance is made against the phalanges then the flexores digitorum do flex the wrist after they have flexed the fingers, but if resistance is made against the metacarpal bones so that only pure flexion of the wrist is required then the flexors of the digits contract. With regard to the muscles of the thumb, the extensor ossis metacarpi, as stated by Duchenne,[10] is a flexor of the wrist. Extension of the wrist is performed by the three extensors of the wrist and also by the extensor secundi internodii to a slight degree but not by the other two extensors of the thumb. The question of the part played by the extensors digitorum will be discussed presently. Abduction of the wrist is performed by the flexor carpi radialis, the three extensors of the thumb, and the extensor radialis longior, and adduction by the flexor carpi ulnaris and the extensor carpi ulnaris. It is interesting to note that Duchenne[11] from electrical stimulation denies that the flexor carpi ulnaris is an adductor or that the flexor carpi radialis is an abductor of the wrist. In reply to that I would say that in performing the movement of adduction and abduction these muscles can be felt to contract and it shows how important it is that results obtained by electric testing should be verified by reference to the living body. The action obtained by electrical stimulation is that of the muscle acting alone, a condition which does not exist in the body unless all the other muscles are paralysed. In passing round from the movement of flexion of the wrist to adduction the flexor carpi ulnaris is either contracting with the palmaris longus in flexion or with the extensor carpi ulnaris in adduction. It is quite possible that if this last muscle, the extensor carpi ulnaris, were absent the flexor carpi ulnaris would not be able to adduct the wrist alone. Now, according to Duchenne[12] faradisation of the extensor carpi radialis longior and of the extensor carpi ulnaris alone produces extension with abduction and adduction respectively, so that these two muscles acting alone could not produce pure abduction or adduction; to do so each must act with the flexor carpi radialis and ulnaris respectively.

In reference to the movements of extension and flexion of the wrist an important question arises as to the part taken by the extensors and flexors of the fingers in this movement. It is mentioned by Duchenne,[13] and whether he was the first to point it out I do not know, but it is an observation which has been frequently confirmed, and I have already referred to it in speaking of the synergic action of the extensors of the fingers and the flexors of the wrist, that in lead paralysis affecting the extensor communis digitorum, but not the extensores carpi, as long as the person keeps his fingers flexed he can extend with force his hand on the forearm. But if he should wish to extend his fingers his first phalanges remain immoveable and his hand is flexed on the forearm with as much energy as the efforts he makes to produce extension of the fingers. Sir William Gowers[14] in his work on "Diseases of the Nervous System" states in speaking of lead paralysis, in which the extensores digitorum are paralysed but not the extensores carpi, that "as long as the special extensors of the wrist retain power this joint can still be extended when the fingers are flexed so as to close the fist, although the wrist cannot be extended when the fingers are also extended. The reason for this seems to be [illegible] When in health the hand and fingers are both [illegible] nsors of the wrist act very little if at [illegible] wrist joint is effected by the long extensor of the fingers; if, however, the fingers are flexed the extension of the wrist is effected by the special extensors." So that, according to Duchenne, if a person with paralysis of the extensores digitorum tries to perform the movement of extending his fingers the only result he obtains is flexion of the wrist, and according to the extract just given a patient with paralysis of the extensores digitorum has no power to extend the wrist as long as he tries to do it with the fingers straight. These conditions are frequently met with in cases of lead paralysis.

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[6] Loc. cit., § 216.

[7] Loc. cit., p. 315.

[8] Loc. cit., p. 316.

[9] Loc. cit., p. 15[illegible]

[10] Loc. cit., p. 2[illegible].

[11] Loc. cit., p. 157.

[12] Loc. cit., p. 163.

[13] Loc. cit., p. 199.

[14] Vol. II., p. 839.

Now, the problem which is before us and which has, so far as I know, never been explained is: Why do not the extensors of the wrist, which in this case are healthy, come to the rescue and help the paralysed extensors of the fingers to extend the wrist? They certainly do *not* contract and there must be some explanation of the inability of the person to make them do so. Now, let us observe what happens in the normal condition. With the fingers flexed so as to form a fist, if the wrist be required to be extended, the work is done by the three extensores carpi and their tendons at the wrist and especially the extensores carpi radialis longior and ulnaris can be felt to contract. If now in the course of this extension the fingers be suddenly extended, the extensors of the carpus immediately cease to contract and the work of extension is done by the extensors of the fingers. But the extensors of the fingers cannot act without at the same time causing the flexors of the wrist to contract and by putting one's thumb and finger on the tendons respectively of the extensor carpi radialis and the flexor carpi ulnaris it will be found that when the fingers are extended the extensor carpi can be felt to relax and the flexor carpi ulnaris to contract. The wrist can therefore be extended fully by the extensors of the fingers without the help of the extensors of the wrist, but as the extensors of the fingers have to do this against the contraction of the flexors of the wrist there is a feeling of constraint. Now what will happen if strong resistance be made to the extension of the wrist when this movement is performed by the extensors of the fingers, which are weak muscles; will the extensors of the wrist—so to say—come to the rescue and take part in the movement of extending the wrist? As a matter of observation I have found that they will come and help. But—and I think that this is a most important point and one which I believe has not been shown before—as long as the fingers remain extended, the extensors of the wrist will not help until a certain resistance has been reached and when this amount of resistance is reached the extensor tendons of the wrist can be felt to contract. On the other hand, if the extensors of the fingers retire from the contest and let he fingers flex, the extensors of the wrist instantly contract, no matter how slight the resistance may be. It therefore seemed to me important in extending the wrist by means of the extensors of the fingers to find out, first, the amount of resistance necessary to cause the extensores carpi to contract; and, secondly, the amount of resistance necessary to cause the flexores carpi to cease contracting. The experiment was made with the forearm placed on the flat surface of a table with the palm downwards and with the hand projecting beyond the edge of the table in a line with the forearm, with the fingers extended. Resistance was applied in one of two ways: in the one by passing a broad band over the extended fingers, taking care to keep it beyond or peripherally to the metacarpo-phalangeal joint and then to attach this band to a fixed point with a dynamometer interposed. Against this fixed point the person extended the wrist-joint while the finger of the observer was placed on the tendon of the extensor carpi radialis longior. The other method consisted of keeping the fingers extended and by means of an assistant increasing the traction on the hand until the tendon of the extensor carpi could be felt contracting. The latter was found to be the better method, as the wrist being fixed it was more easy to insure that other movements should not be made which would prevent the tendon being felt. The result of several examinations showed in my own case that the pressure of from three to four pounds was required to be applied to the extended fingers before the extensor carpi radialis longior could be felt to act.

It might be thought that the flexores carpi would cease to contract as soon as the extensores carpi took up the work. But this was not found to be the case, and in some cases more pressure was required, as much as 10 pounds having to be applied before the tendons of the flexores carpi relaxed. The relaxation of the flexors of the carpus is a much more difficult matter to determine, as in some trials they seemed to leave off contracting at once, while in others they were still contracting even with a pressure strong enough to overcome the resistance of the wrist. I think that the following is the explanation. If the fingers be actively extended to the full amount, or if they be quickly extended, the flexors of the wrist are felt to contract synergically and if in this condition pressure be made against extension of the wrist the flexors of the wrist will not relax; but if the extension of the fingers be made very slowly and not to the full degree the flexors of the wrist will hardly be felt to contract or very slightly and in that condition very little pressure against the extension of the wrist suffices to relax them altogether. It therefore appears that if the predominant idea is extension of the fingers, then the flexors of the wrist contract and remain contracted if this combination be required to take part in the superadded movement of extension of the wrist. Now if the movement of extension of the fingers is not made to the full extent and the superadded movement of extension of the wrist becomes the predominant one, the flexors of the wrist cease acting as soon as pressure is applied to the dorsum of the first phalanges, although the extensor communis digitorum is taking part in the movement and its tendons can be seen to stand out. I think that these experiments show that if the movement of extending the wrist be performed with the fingers extended, the extensors of the fingers have to do all the work themselves and against the contraction of the flexores carpi, until the amount of work done amounts, as in my own case, to three or four pounds, when the extensores carpi will join in and help them.

Now to apply this to what we find in lead paralysis In paralysis of the extensors of the fingers due to lead, if the movement of extension of the wrist be started by that of attempting to extend the fingers, the extensores digitorum being paralysed cannot move at all and so cannot possibly reach the amount of three pounds which, as we have seen, is required for them to attain before the extensores carpi will come in and help them. The important point is that the patient has no power to make the extensors of the carpus contract and the only resulting movement is flexion of the wrist due to the synergic action of the flexores carpi. It rather reminds one of some highly organised establishments where, if one of the servants be incapacitated, it is no one's place to do the work which is consequently left undone.

Following on the results obtained from examining the action taken by the extensors of the fingers in extending the wrist I have examined the movement of flexion of the wrist to see the part taken in that movement by the flexors of the thumb and fingers. I have already mentioned that the flexors of the fingers take part in the flexion of the wrist and they do so very readily. It is also to be noted than when the flexores digitorum act as flexors of the wrist the synergic action of the extensores carpi does not occur. When, however, we cause the fingers and thumb to contract powerfully, as in grasping, and while this is occurring we flex the wrist, we get an entirely different condition.

Here we have taking part in the movement of grasping the flexors of the thumb and fingers and also the synergic action of the extensors of the wrist and the question is, what will happen if we now flex the wrist? Will the movement be done by the flexors of the fingers or will the flexors of the wrist come and help and, lastly, will the extensors of the wrist relax? It will be observed that if this movement be attempted while a strong grasp is maintained and also if the flexion of the wrist be made slowly there are a considerable feeling of strain and a certain amount of tremor due to the antagonism between the acting muscles. To determine the three above-mentioned points the following method was used: 1. It was first necessary to insure that the grasp of the hand was being maintained throughout the observation and this was done by means of a dynamometer which was grasped in the hand and the index of which could be watched, for I found that in flexing the wrist against resistance as soon as the grasp was relaxed the flexors of the wrist immediately contracted even in the slightest degree of flexion, and as I have already mentioned the whole experiment depended on the grasp being maintained. 2. The forearm was put in the position midway between supination and pronation and a band was passed round the metacarpal bones and either traction was made horizontally in the direction opposed to flexion of the wrist or flexion was made by the wrist against a fixed point; a spring balance was attached to the band and the amount of traction was read off at which the tendons of the flexors of the wrist were felt contracting and also the amount of traction required to make the tendon of the extensor carpi radialis relax. In my own case I found that the tendon of the palmaris longus could be felt first and when the balance measured three pounds, whereas the tendons of the flexores carpi radialis and ulnaris were not felt till from five to six pounds of traction was made. On the other hand, the tendon of the extensor carpi radialis was not felt to relax till as much as from 14 to 16 pounds' traction had been made. The strained feeling would therefore be due to the antagonism between the extensors of the wrist and the flexors of the wrist. These experiments would seem to show that the combination between the extensores digitorum and flexores carpi and also between the flexores digitorum and extensores carpi is so strong that the muscles which flex and extend the wrist will oppose each other rather than sever their connexion with the finger muscles when the wrist is being extended or flexed in conjunction with extending the fingers or flexing the fingers and thumb.

While discussing the question of the action of the extensors of the wrist with the flexors of the fingers it will be advisable to say a few words about the nature of this combination. Duchenne calls attention to the definite association between the above-mentioned muscles, as well as that between the extensors of the fingers and flexors of the wrist, and that between the extensor ossis metacarpi pollicis and the extensor carpi ulnaris. He speaks[15] of the "moderating synergy," and he writes "that the synergic contraction of the flexors of the hand on the forearm is inseparable from the muscular function which ought to produce voluntary extension of the first digital phalanges. To place the common and special extensors of the fingers in the greatest elongation in order to augment their dynamical power: such is the useful end of this instinctive combination of the flexors of the hand during extension of the fingers." He refers to the over-extension of the wrist which occurs in extending the fingers when the flexors of the wrist are paralysed and the explanation which he gives is that "the common extensors of the fingers being up to a certain point at the same time extensors of the hand on the arm their contraction renders necessary the moderating synergy of the flexors of the wrist." One of the earliest mentions that I can find about a muscle passing over two or more joints is that of William Cowper[16] who in his Anatomy reproduces Bidloo's splendid anatomical plates. He gives various reasons why a muscle passes over two or more joints, but he does not mention that other muscles are brought into the movement. John Hunter[17] in his second Croonian lecture delivered before the Royal Society in 1777 was as far as I can ascertain the first to enunciate the doctrine of synergic muscles. He says: "Muscles often go over two, three, or four joints and only move the third and fourth, as the flexors of the last joints of the fingers; but to prevent th[illegible] action the exter[illegible]iged to interfere [illegible]s really the use of [illegible]xors of the wrist [illegible] in the greatest [illegible]namical power so that when the wrist is flexed to a right angle the grasp has about one-half the strength that it has when the hand is in a line with the forearm, yet that, I think, is not their object. For if the wrist be extended passively as far as it will go and if then the fingers be actively extended the flexor carpi ulnaris will still be felt to contract without remedying the position of the wrist-joint even though the extensors of the fingers are working at a great disadvantage. If the function of the flexors of the carpus was to put the *extensors of the fingers in the most advantageous* position they would flex the wrist and bring the hand into position in a line with the forearm. Their function appears to be to fix the wrist in whatever position it happens to be, so that the fingers will have a secure basis to work upon. Following the opinion stated above by John Hunter I think the condition may be stated thus: When a muscle by passing over two or more joints has two or more different actions, then, if only one of these actions is required, other muscles are brought into the movement whose actions are antagonistic to those of the muscles which are not required. In the above quoted case the extensors of the fingers by passing over the wrist are extensors of the wrist as well as extensors of the fingers, and as extension of the wrist is not required the antagonists to this action—viz., the flexors of the wrist—are brought into the movement and the resultant movement is extension of the fingers without extension of the wrist. This rule applies as far as I have been able to observe throughout the muscular system. These muscles which are brought into action to neutralise an action which is not required I should propose to call "synergic muscles"—a term used by Duchenne.

LECTURE II.

Delivered on June 11th.

MR. PRESIDENT AND GENTLEMEN,—The next movements that we have to consider are those of the *radio-ulnar articulations*, pronation and supination. The muscles producing pronation are the pronator teres and pronator quadratus and if the resistance to the movement be applied to the hand, as it usually is, the flexor carpi radialis and palmaris longus contract. The pronator quadratus cannot be felt contracting, but it is one of the muscles the action of which must be inferred from its position. Supination is performed by the supinator brevis, biceps, and when the resistance is applied to the hand by the extensor carpi radialis longior and brevior and by the extensors of the thumb. The strongest supinator is the biceps and its action as such was described by Winslow.[18]

In the above list I have omitted the supinator longus, or as it is now called the brachio-radialis. This muscle has had a very chequered career at the hands of anatomists. According to Winslow it "was believed to be concerned only with supination till Mr. Heister observed that it was a flexor of the elbow-joint," and he adds, "before it can act as a supinator the hand must be in the greatest degree of pronation, and even then it can do little more than bring the radius back to its natural position." According to Duchenne[19] the supinator longus flexes and pronates the forearm if it is previously *completely supinated into the mid-position* of pronation and supination and its denomination of long supinator is inexact since the muscle exercises a contrary action. In the anatomical text-books at the present time the teaching is that the supinator longus pronates when the forearm is fully supinated and supinates when the forearm is fully pronated. In the midst of so much conflicting evidence it seems to me that the only way to settle the question is to go directly to natu[illegible] in the living body. Ten[illegible] observation on this musc[illegible] while it took an active part in flexing the forearm, no action in it [illegible] pronation and supina[illegible] extreme pronation and [illegible]re is some slight action [illegible] a point which anyone [illegible] pronating the forearm against resistance, taking care that no flexion of the forearm occurs. I think it will be found that no contraction of the supinator longus will be seen except perhaps in strong pronation, but the moment that the slightest flexion is made the muscle instantly stands out in strong outline. I therefore conclude that the supinator longus, or the brachio-radialis as it would be better to call it, does not take part in supination and only in strong movements of pronation.

It is interesting to note that Duchenne[21] according to his electrical observations considered "that the biceps could not be put isolatedly into contraction without producing supination at the same time," and he cites a case where a person had lost the use of the brachialis anticus, supinatores *longus et brevis*, and the pronators, but not the biceps, with the result that he could not flex the forearm without supination owing to the atrophy of the pronators and from this he argues that we must conclude that the biceps only supinates during flexion of the forearm and he considers that it ought to be called the flexor supinator. He also seems to hold the opinion from this that simple supination is performed by the supinator brevis and simple pronation by the pronatores teres and quadratus, whereas the biceps, he considers, only takes part in flexion supination and the supinator longus in flexion pronation.[22] But what are the facts of the case? No doubt the biceps is a flexor as well as a supinator and yet if one examines one's biceps when the forearm is being supinated against resistance without flexion of the elbow, and this is a movement which everyone can perform, the biceps is found to be vigorously contracting and it certainly can act without flexion of the elbow. It was while examining this point that it suddenly occurred to me: Why does not the elbow flex in supinating the forearm when the biceps is contracting so strongly? There must be some opposing force to prevent flexion. We have here, in fact, an example of a muscle, the biceps, having two actions, supination and flexion, of which the latter is not required and therefore, according to the rule given in the first lecture, the antagonist to this flexor action must be brought into the movement. The antagonists to the flexors of the elbow are the extensors of the elbow. In other words, it is not possible to have strong pure supination without contraction of the triceps. If, however, while supinating, it be required to flex the elbow, the triceps at once ceases to contract. Further, if the triceps be paralysed the patient cannot supinate without flexing his elbow, because the flexor action of the biceps is not neutralised; and if the biceps be partially paralysed and weaker than the triceps, the elbow is extended during strong supination just as the wrist is over-extended in grasping when the flexors of the fingers are weak. It is also to be noted that apparently it is not the whole triceps which takes part equally in this movement, for of the three heads by which the triceps arises the outer and inner head contract more than the long head arising from the scapula. The probable reason for this is, as we shall see later, that the long head of the triceps is an adductor of the humerus; now the only counteraction required in this movement of supination is extension of the forearm and not adduction of the humerus, therefore the part of the triceps which performs this movement of adduction does not contract so readily. As we shall see later the pronator radii teres is also a flexor of the forearm on the arm as well as a pronator—though Winslow[23] states that it can have no action but pronation—and to neutralise its flexor action there is also contraction of the triceps but to a much less degree than in the case of supination in proportion as the flexor action of the pronator teres is much less than that of the biceps.

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[15] Loc. cit., § 169.

[16] Myotomia Reformata, 1724.

[17] Loc. cit., p. 238.

[18] Loc. cit., vol. i., Section III., No. 582.

[19] Loc. cit., p. 142.

[20] On Some Points in the Action of Muscles, Brain, vol. xiv.

[21] Loc. cit., §§ 146, 147.

[22] Loc. cit., p. 142.

The movements of the elbow-joint are flexion and extension; the muscles which take part in flexion are the biceps, brachialis anticus, supinator longus, pronator radii teres, and when the hand is closed there is very slight action in the flexores carpi but none in the extensores carpi. In the above list the brachialis anticus is certainly a pure flexor of the forearm and as the supinator longus does not, according to my observations, take part in the movements of supination I look upon it as a flexor with slight pronator action. We have therefore the supinator longus and the pronator radii teres acting as flexor pronators and the biceps as a flexor supinator. Now, flexion of the forearm can be performed when it is in the position of extreme pronation or supination or in any position intermediate between these two, so that the muscles which pronate and supinate the forearm at the same time that they flex must be in equilibrium, but the opposing muscles are the supinator longus with the pronator radii teres as pronators and the biceps as supinator—muscles so different and unequal in strength that it does not seem possible that the former two can balance the biceps. I can only suggest, though I have not yet come across a case of isolated paralysis of the pronator quadratus, that this muscle may assist the pronator teres and supinator longus in neutralising the supinator action of the biceps in simple flexion of the elbow. The association of flexion or extension of the elbow with pronation or supination produces some interesting combinations; for instance, if while flexing the elbow the forearm be supinated the pronator radii teres, which was acting as a flexor of the elbow, seems to me to cease as soon as the movement of supination is performed, but, on the other hand, the biceps does not cease to act in flexing and pronating at the same time. Now what will be the action of the biceps if during supination the forearm be extended? Will it continue to act by virtue of its position as a supinator or will it cease when it takes part in the movement of extension to which its action of flexion is an antagonist? The answer is that the biceps contracts during the combined movements of extension of the elbow and supination of the forearm and therefore the action of the extensors of the elbow must be stronger than the flexor action of the biceps, otherwise there would be no extension.

What part do the flexors and extensors of the carpus take in the movements of the elbow? According to Duchenne[24] the flexors of the wrist are auxiliaries of the flexors of the elbow and when these are weak the flexor of the wrist are put on the stretch by extending th wrist and can then assist to flex the elbow. My experience is that the action of the flexors and extensor of the carpus is exceedingly slight as flexors of th forearm on the upper arm. In cases which I hav had where the supinator longus was absent and th biceps was very feeble the patients in flexing the elbow firs pronated the forearm, the extensors of the wrist then contracted, hyper-extending the wrist, and finally the elbo very slowly flexed. It was difficult in these cases to sa whether the flexion was performed by the pronator teres an flexores carpi or by the pronator teres and the extensore carpi. William Cowper[25] expressed the opinion that th flexors of the carpus when they "act together, as they d when they bend the wrist, destroy each other's action on th elbow and have little or no effect on it." To ascertain th share taken by the flexors and extensors of the carpus i flexing the elbow I have tested the amount of work done b flexion of the elbow when the flexors of the wrist took par in the movement and when they did not. The trial was mad first with the resisting band over the hand just above th heads of the metacarpal bones so as to include the carpa muscles, and on flexing the elbow the maximum amount c work was found to be about 40 pounds, whereas on placin the band over the lower end of the radius and ulna th amount went up to from 50 to 54 pounds. This increase i due to the shortening of the arm of the lever of the thir power by transferring the weight from the hand to the lowe end of the forearm. To obviate this the resistance band wa applied to the lower end of the forearm with (1) the wris tightly clenched and (2) the wrist lax. In several observations identical figures were given in the two cases in one observation when the wrist muscles were used th force was two pounds more. The proportion of two in 50 is s small that the power of flexing the elbow by the muscle of the carpus is proportionally very slight and is almost negligible quantity. The effect of shortening the arm o the lever is very well shown by putting the resisting ban in the middle of the forearm when the amount of work don goes up to 70 or 80 pounds, as against 50 pounds when th band is over the lower end of the radius, and it is wel exemplified by a person carrying a heavy basket by th handle on the bent arm, putting the handle as near to th elbow as possible.

The extensor carpi radialis longior, which arises from th lower third of the outer condyloid ridge of the humerus, ha been considered to be a flexor of the elbow-joint, but whe the wrist is lax I cannot find that there is any contractio of this muscle when strong flexion of the elbow with th forearm pronated is made against a resistance.

To determine the question of the relative strength of th flexors of the elbow in the various positions of supinatio and pronation of the forearm I have taken the maximum i myself when the forearm was completely pronated, when i was completely supinated, and when in the mid-positio between the two. When fully pronated the amount wa 40 pounds and in the other two 42 pounds, so that, as befor said, in the position of pronation the supinating action o the biceps must be neutralised, as the flexor force is nearl the same in all three positions.

Extension of the elbow, or rather of the bones of th forearm on the humerus, is performed by the triceps an anconeus, and I am unable to find that the extensors of th wrist or fingers take any part in the movement

The movements of the humerus on the scapula are s involved with the movements of the scapula itself tha it will be more convenient to take them together an afterwards those movements of the scapula which ar performed without the participation of the humerus. Th movements of the humerus are best described in term of the planes corresponding to the three dimensions o space—viz, antero-posterior, latero-vertical, and horizontal In the antero-posterior plane the humerus starting fron the hanging position is advanced forwards, flexed as i is also called, to the horizontal line and thence it i elevated to the vertical position; on the return journey th humerus is depressed through 180° to the hanging position and thence it can be carried backwards or retracted. I the latero-vertical plane the humerus can be abducted to the horizontal line and thence to the vertical and on the return journey it is adducted through 180° to the hanging position. In the horizontal plane the humerus is horizontally adducted when it is moved towards the middle line and horizontally abducted when moved away from the middle line to the lateral plane, behind which it is horizontally retracted. Besides the above movements there is rotation in and out. In advancing the humerus the anterior fibres of the deltoid, the clavicular fibres of the pectoralis major, the biceps, and probably the coraco-brachialis, contract and carry the humerus forward, nearly to the horizontal line. This action tends to rotate the scapula with the acromion downwards and to push its inferior angle towards the spinal column, but this is prevented by the contraction of the acromial fibres of the trapezius—which Duchenne showed to be the fibres taking part in this movement and not the clavicular fibres—and it is also prevented, as I consider, by the contraction of the inferior fibres of the trapezius. As shown by Duchenne the deltoid and the other muscles cannot carry the humerus further than the horizontal line. After passing through 45° the serratus magnus comes to their assistance and draws the lower end of the scapula forwards, raises the acromion with the humerus and thus the arm is elevated to the vertical position. Now th[illegible] end of the s[illegible] I have seen c[illegible] this idea. The first case which drew my attention to this point was that of a girl who had wasting of the lower part of the trapezius, below a line drawn horizontally from the spine of the scapula to the vertebral column. The rest of the trapezius acted well and the serratus magnus was not affected, which was well shown by the patient being able to push forward with the advanced arm against resistance. On telling the patient to advance the arm slowly I observed that the first action on the scapula was to rotate it so that the inferior angle moved half an inch towards the vertebral column and the posterior border of the scapula projected like a wing; this projection reached its maximum when the humerus was advanced through about 45°. Then the serratus magnus contracted and as it drew the lower end of the scapula forwards the deformity diminished and finally disappeared. The explanation that I would offer for this occurrence, which does not happen with normal muscles, is that though the serratus magnus is mechanically in the position to fix the scapula and to prevent its lower angle from being rotated towards the vertebral column, it is not its function, when the movement is one of advancing the shoulder, to act on the scapula until the humerus has been moved by the deltoid through about 45°. The inferior part of the trapezius apparently is the proper muscle to fix the scapula in advancing the humerus and when these inferior fibres are paralysed the serratus will not step into the breach, so to say, and do the work for the trapezius, which consequently is not done at all. I think that this is another instance of what I described in the previous lecture in the case of paralysis of the extensors of the fingers due to lead poisoning and the inability of the extensors of the wrist to help the extensors of the fingers until the latter experience a given degree of resistance. I consider that in a movement such as advancing of the humerus certain muscles are told off to come into action at a certain period of the movement and not before. [A case (under the care of Dr. Ormerod) with paralysis of the inferior fibres of the trapezius was shown to illustrate this movement of the scapula.]

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[23] Loc. cit., § 889.

[24] Loc. cit., § 167.

[25] Loc. cit., p. xxvii.

I have lately had the opportunity of examining a case under the care of my colleague, Dr. James Collier, where the whole trapezius had wasted and practically disappeared from a lesion of the spinal accessory nerve in the neck, with the result that at rest the scapula was half an inch lower than on the other side and the acromion was rotated downwards and forwards so that the base of the scapular spine was two inches further away and the inferior angle was half an inch further away from the vertebral column than on the other side. On making this patient abduct or advance the humerus it was seen that the inferior angle moved inwards or backwards for half an inch and when the movement of the arm was resisted for as much as an inch, until the humerus had moved through an angle of 45°, when the inferior angle of the scapula was drawn forwards by the serratus magnus, the deformity disappeared, and the humerus was powerfully carried [illegible] to the vertical position. In this case, as the trapezius was the only muscle paralysed, the deformity and backward movement of the scapula must be due to its absence and the only conclusion that we can draw is that although the serratus magnus is in the anatomical position to be able to act, and is generally supposed[26] to fix the scapula, the will has apparently no power to make it act before its appointed time and to take the place of the paralysed trapezius. Whether it would be possible to educate the serratus and by practice to induce it to contract sooner I am not in a position to state, but if the condition may be taken as the same as that of paralysis of the extensors of the fingers in lead paralysis I should think it doubtful.

What determines the period at which the serratus begins to act it is difficult to say, but it seems to have some relation [illegible] th the scapula or to [illegible] and the tension it produces on the scapula. Normally in advancing the arm the scapula hardly moves at all till the humerus makes an angle of about 45° and then the inferior angle begins to move outwards by the commencing action of the serratus and when the humerus is horizontal the angle with the scapula remains constant and the elevation of the humerus to the vertical position is completed by the serratus. If, however, the deltoid is paralysed or the shoulder is fixed the serratus begins to act at once and the scapula moves outwards at once; so much so that this movement of the scapula is a diagnostic sign of one of the two above conditions. Now it is quite easy to imitate normally this movement by rotating the inferior angle of the scapula forwards and the acromion upwards without first moving the humerus, but in none of these conditions is the movement imitated by the action of the deltoid and there is no displacement of the inferior angle of the scapula backwards or towards the spine.

Another point of interest, occurring incidentally, is that the projection or winging of the scapula may be caused by paralysis of the trapezius and especially of its lower fibres, as well as by the well-known paralysis of the serratus magnus. The difference between the two conditions is that the deformity due to the absence of the trapezius is less than that of the serratus, the scapula projecting only half an inch, and that it reaches its maximum when the humerus is advanced through 45°, after which the deformity diminishes and disappears when the humerus is horizontal; moreover, the humerus can be elevated to the vertical position. With paralysis of the serratus magnus the deformity increases as the arm is advanced and reaches its maximum when the humerus is horizontal, beyond which level there is no muscular power to raise it. The diagnosis of paralysis of the serratus is also confirmed by the ease with which the scapula can be displaced backward by pushing against the advanced arm, which is not the case with the trapezius paralysis.

The action of the upper fibres of the pectoralis major in advancing the arm is important and was described by Winslow.[27] It is an action which does not appear in some people until the arm is advanced in a plane nearer to the middle line than the antero-posterior plane. The description just given of advancing the humerus applies equally well to the movement of abducting the humerus, with the exception that the middle part of the deltoid and the supraspinatus abduct the humerus, and the pectoralis major does not act, but the same conditions are met with in regard to the movements of the scapula and its relation to the [illegible] in the movement of advancing the [illegible]duction of the shoulder are [illegible] the erectores spinæ, a subject [illegible] the muscles of the trunk are considered. Depression of the humerus in the antero-posterior plane from the vertical position above the head through 180° is performed by the sternal fibres of the pectoralis major, the pectoralis minor, the latissimus dorsi, [illegible] the te[illegible] the lo[illegible] laris. [illegible] are not from my observations depressors of the humerus and I cannot agree with Duchenne[28] that these fibres are at the same time depressors and elevators of the humerus according to the position of the limb—i.e., depressors only from the vertical to the horizontal line—and that they are, as Duchenne gracefully describes, the agent used equally by the enemy to strike with a sword or by the priest to bless the faithful. I cannot discover that the upper fibres contract at all in forcibly depressing the humerus *in any position* and I was interested to find, what I was not aware of, that Winslow[29] states that the superior fibres serve chiefly to raise the arm forward. Duchenne's opinion was evidently founded on the fact that if the humerus be elevated vertically and the superior fibres be stimulated electrically they will depress the humerus to the horizontal line, but according to my observations they do not contract voluntarily to depress the humerus, and although they are in the anatomical position to depress the humerus they are not included in the group of muscles told off to perform this movement.

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[26] See Duchenne, loc. cit., p. 115.

[27] Loc. cit., [illegible]

[28] [illegible]

Of the other muscles depressing the humerus I would refer to the long head of the triceps. Now, as this muscle cannot contract without extending the elbow there is also, if only pure adduction be required, slight synergic action on the part of the biceps and supinator longus to neutralise the extensor action of the triceps. This action of the long head of the triceps is very well seen in cases—of which I have one under my care at the present time at the National Hospital for the Paralysed and Epileptic—where the triceps is unaffected, while the flexors of the elbow are paralysed. Here every time the patient depresses or adducts the humerus the elbow is extended by the unopposed long head of the triceps.

Retraction of the hanging humerus posteriorly to the vertical line is performed in addition to the latissimus dorsi and teres muscles by the posterior half of the deltoid. The pectoralis minor takes part in the movement but not, I believe, the pectoralis major, so this movement is a means of separating the action of these two muscles.

Adduction of the humerus is performed by the same muscles as take part in depressing the humerus, with the addition that both parts of the pectoralis major, and also the posterior fibres of the deltoid, act as adductors, as Winslow[30] pointed out. According to Duchenne[31] "electrical experiment shows that the posterior third of the deltoid acts synergically with the other fibres of the same muscle to elevate the humerus through an angle of 45°, but above this point the posterior fibres become depressors of the humerus and antagonists to the other fibres until it has descended to that point of elevation which results from the contraction of the posterior bundle." "This," he says, "justifies the opinion of Bichat,[32] contested by many anatomists, that the deltoid can be at the same time both elevator and depressor of the humerus." My observations would make me join the ranks of the contestors of this opinion, as I cannot find that the posterior fibres of the deltoid take any part in elevation of the humerus and they are in my opinion adductors. On this question I would again like to point out that because a muscle can produce two opposite movements when stimulated by faradisation we cannot be certain from this that this muscle performs these two opposite movements when acted on by the will. We have first to prove that the muscle is actually contracting in each of these opposite conditions, for it does not follow that because a muscle is in the anatomical position to take part in a movement therefore it *must* do so.

In both movements of depressing the humerus and adducting it the scapula has to be fixed by the rhomboids and the lowest fibres of the trapezius, so that when the former are absent the inferior angle of the scapula is drawn into the axilla by the teres muscles, as was first pointed out by Erb, and when the lowest fibres of the trapezius are absent the scapula is lifted upwards by the rhomboid and the teres muscles. The contraction of the rhomboid is, however, stronger than that of the trapezius and in some cases the latter appears not to act in adduction. Conversely, when the adductors are weak and the rhomboid is normal it carries the inferior angle of the scapula to the spine in adducting the humerus. The pectoralis minor also fixes the scapula in depressing the humerus, and when it is absent, as I have lately seen in a case, the scapula is elevated and the coracoid process projects under the skin

In depression and in adduction of the humerus from the horizontal line there is contraction of the abdominal muscles, as was pointed out by Winslow,[33] and especially of the rectus abdominis and obliquus externus, which fix the ribs and prevents them being drawn up by the pectoralis major. In depression I have found that the recti of both sides act, but those of the same side much more than those of the opposite side, while in adduction the rectus of the same side only contracts but in addition the erector spinæ of the same side takes part The question is whether the abdominal muscles are essential for the performance of the movements or whether it is possible to perform them without coöperation of these muscles. I have therefore ascertained the amount of work that is required to be done before the rectus abdominis contracts in the movement of depressing or adducting the upper limb from the horizontal line. I find that the amount is exceedingly small and that in the erect position, with the arm in the horizontal position, the rectus abdominis could be felt to contract when the scale only registered from 4 to 7 pounds, and as this includes the dead weight of the arm, which was found to be 2½ pounds, the actual work done by the muscles was from 1½ to 4½ pounds, and this small amount was sufficient to bring in the fixing action of the rectus abdominis. The smallness of this amount is further shown when compared with the maximum amount of force which can be produced by this movement. In my case it was 30 pounds, so that the earliest contraction of the rectus abdominis occurred when only about one-fifteenth of the maximum strength had been used. It therefore occurs not at the end of a strong movement, but so early that the movement can hardly take place without it. As this action of the rectus takes place equally well in standing, sitting, or lying down its participation is not necessary for maintaining a certain position and therefore I think it must be included in the list of muscles which are essential for the movement of depression and adduction of the humerus.

The movement of horizontal adduction which takes place when the advanced humerus is drawn horizontally to the median line is carried out by the anterior fibres of the deltoid, the coraco-brachialis, and by the pectoralis major; where there is no resistance by the upper fibres only, but where an obstacle is to be overcome both parts of this muscle act.

I would here say a few words about the pectoralis major, one of the most interesting muscles of the body. The pectoralis major is a muscle consisting of two parts, clavicular and costo-sternal, which can either act in unison or in antagonism. The best way to bring out the actions of the two parts working together is passively to advance the upper arm to the horizontal line and then to tell the patient to carry his hand towards the middle line against resistance. If he then raises his hand upwards against resistance the upper fibres alone contract and if he depresses his hand the lower fibres alone contract. In fact, as Winslow said, the pectoralis major may be looked upon as two distinct muscles, and I have published[34] cases of complete absence of the lower fibres due to infantile paralysis with perfect preservation of the upper fibres. Associated with the loss of the lower pectoral fibres there was complete paralysis of the latissimus dorsi and triceps. In horizontal abduction the different fibres of the middle part of the deltoid successively come into action from before back until the posterior fibres act, together with the latissimus dorsi, teres muscles and subscapularis. Associated with horizontal abduction of the humerus is the fixation of the scapula by the trapezius in which all but the clavicular and acromial fibres take part. This is the best movement to bring out the trapezius and particularly the middle part which it is often very difficult to make out For this purpose the upper limb is put in the horizontally advanced position parallel to the middle line and it is then passively pushed backwards so as to make the posterior edge of the scapula visible. If now the patient be directed to abduct the humerus horizontally against resistance, the fibres of the trapezius and especially those inserted into the spine of the scapula are well seen against the sharp edge of the posterior border of the scapula and they have a direction almost horizontal and not so oblique downwards and outwards as the fibres of the rhomboideus minor, with which they might be confounded.

Of the rotators of the humerus the rotators in are the pectoralis major, both parts, deltoid (anterior fibres), teres major, latissimus dorsi, and probably the subscapularis. I have nothing to add to the muscles usually *included as rotators out—viz*, teres minor, infraspinatus, and deltoid (posterior fibres)—except to point out that in *rotation* in when the humerus is horizontal, the rhomboid chiefly acts to fix the scapula and in rotation out the lowest fibres of the trapezius perform this function. Consequently in paralysis of the trapezius there is great displacement of the scapula in rotation out of the humerus but not with rotation in.

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[29] Loc. cit., No. 836.

[30] Loc. cit., p. 288.

[31] Loc. cit., p. 60.

[32] Anatomie Descriptive, p. 226, Paris, 1846.

[33] Loc. cit., Section III., p. 290.

[34] Transactions of the Royal Medical and Chirurgical Society, 1885.

The scapula has also movements which are independent of those of the humerus—viz., elevation, depression, advancing, retraction, and rotation with the acromion upwards which has already been described. Elevation is performed by the trapezius and especially by the acromial fibres, though the clavicular do also contract in some patients though apparently not in all, and by the levator anguli scapulæ. According to Duchenne[35] the inferior part of the serratus magnus is an elevator of the shoulder as shown by electrical faradisation, and upon being stimulated the serratus first rotates the scapula with the acromion upwards and then elevates it. Nevertheless, Duchenne states that when he made a person elevate the shoulder and he applied strong resistance to its point, he found that the trapezius, rhomboid, and the upper part of the pectoralis major alone contracted but not the serratus magnus. Yet as soon as the patient raised his arm the muscle contracted at once. He explains that the reason why the serratus magnus does not act is probably because its contraction would interfere with respiration in keeping elevated the ribs on which it takes its origin. I venture to think that the will has not the power to leave a muscle out of a group if it is included in it, even if it interferes with respiration, and that the explanation is rather to be found in the fact that the serratus magnus is not an elevator of the shoulder and also that the electrical results are not to be relied upon unless they are corroborated by voluntary movements. I also think that Duchenne is not distinguishing between the two different movements of (1) elevation of the acromion where the scapula is rotated by the serratus magnus and (2) elevation of the whole scapula as in shrugging the shoulders where the serratus magnus does not act.

I have nothing special to remark about the other movements of the scapula except that the levator anguli scapulæ sometimes takes part with the serratus magnus in advancing the scapula and perhaps it counteracts the rotation of the scapula, with the acromion upwards, by the serratus magnus.

With regard to movements of the spinal column, the chief movements of the lumbar spine are flexion and extension, lateral flexion to either side, and rotation to either side. The flexors of the spine are best tested when the person is lying down. The chief of them are the recti abdominis with the pyramidales and also the external obliques, but whether the internal obliques also take part I have had no means of ascertaining. In testing the action of the recti abdominis the person lies flat on his back and crosses the arms on the chest and the thighs are then fixed by passive pressure. It is then often sufficient for the person to bend the head forwards for the recti to tighten up sufficiently to be felt. The complete movement of sitting up from the recumbent position consists of two stag[illegible] to the pubes by [illegible] and then the pe[illegible] the psoas and iliacus and other flexor muscles. It is often important to know, especially in cases of tumour of the spinal cord, if any part of the recti abdominis are paralysed as they are long muscles which are supplied from the sixth to the twelfth dorsal nerves. I observed some years back a symptom which enables the observer to tell if there is any weakness of the upper or lower parts of the recti. This symptom is the movement of the umbilicus. In health in the movement of sitting up the umbilicus does not alter its position, but if from a lesion of the lower part of the cord or its nerves the part of the recti below the umbilicus is paralysed the normal upper part of the recti draws up the umbilicus sometimes to the extent of an inch. As the abdominal wall at the level of the umbilicus is supplied by the tenth dorsal root any marked elevation of the umbilicus in the act of sitting up would show a lesion between the tenth and twelfth dorsal segments of the cord or the roots coming off from them. In the case where I first observed this symptom there was a malignant growth involving the cord at the level of the eleventh and [illegible] ly and the [illegible] Ormerod [illegible] I have no doubt, to weakness of the part of the recti situated above the umbilicus. In cases where the recti abdominis are completely paralysed, as in one case of myopathy which I have seen, the patient cannot approximate the ensiform cartilage to the pubes, and he has first to fix the spine by the erectores spinæ and then to flex the pelvis on the femora and to draw the spine with the abdomen convex forwards by the psoas and iliacus, the flexor muscles of the hips.

The extensors of the spine are the erectores spinæ which can be well felt at their origin on either side of the lumbar spine but whose divisions into ilio-costalis and longissimus dorsi I do not think that it is possible to make out. The action of these muscles can best be made out by making a person, while lying down prone on a bed, lift up the neck and the upper part of the trunk when the muscles can be felt and seen on either side of the lumbar spinal column, or by making the patient extend the spine from the position of bending forwards either in the standing or sitting position.

In connexion with the actions of the flexors and extensors of the lumbar spine are the muscular movements which regulate and maintain the erect posture. In the erect posture—i.e., standing with the feet together in the position of attention—the muscles have to be continually counteracting the influence of gravity, and although when work is being done, as in pushing forwards against an obstacle or as in keeping a door shut, the flexors of the spine act, yet when a person bends forward from the erect position without having to overcome an obstacle it is not the flexors of the spine which act but the extensors, and conversely in extending the spine, as in leaning backwards from the erect position, it is not the extensors of the spine which act but the flexors. This condition has been, I venture to submit, much overlooked in books of general anatomy and also in special books on anatomy for artists. In the one by the late Mr. John Marshall[36] I cannot find any allusion to this point and in a recent similar work[37] the following passages occur on p. 37: "This bulging of the muscles on either side is particularly noticeable when these muscles (erectores spinæ) are in a powerful state of contraction as when a person …… is bending backwards." And again, on p. 121: "If the figure be bent backwards the median furrow is deepened and the erectores spinæ are rendered more prominent owing to the fact that they are now in a powerful state of contraction." If in the above description the movement of bending backwards starts from the erect posture and is not made against resistance I should not be able to agree with it. Merkel[38] also states that in bending forwards the groove in the middle of the back disappears and the vertebral spines become visible and the back becomes smooth and round; [illegible] back muscles of the bent side form a stronger projecting swelling than those on the stretched side. On the other hand, according to the late Mr. W. Adams,[39] the muscles of the spine are in a state of least action when the spinal column is in the erect position. Instead, therefore, of the muscles of the spine in this position being in a state of active tension it is more correct to describe them as in a state of vigilant repose; as soon as the equilibrium is disturbed and the body is inclined to one side the spinal muscles on the convexity of the curve are put on the stretch. Richer[40] also states that on bending forwards the extensors come into action and on bending backwards the flexors of the spine, so that the action is somewhat of a paradox.

But we must go further back to find similar opinions expressed by Winslow,[41] who stated that "the musculi recti serve to support the trunk of the body when inclined backwards . . . for when we stand straight they have no hand in bending the body forward, except we be striving to overcome some resistance." And going further back still we find that Galen[42] in describing his fourth movement of muscles refers to the contraction of a muscle where there is no movement as in the case of maintaining the advanced arm in that position against gravity, so that he evidently recognised that the behaviour of a muscle is different according to whether gravity has to be overcome or not.

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[35] Loc. cit., p. 30.

[36] Anatomy for Artists.

[37] Anatomy for Art Students, by Professor Arthur Thomson, second edition, 1899.

[38] Topographische Anatomie, Zweiter Band, 1899, p. 155.

[39] Curvature of the Spine, second edition, p. 41.

[40] Anatomie Artistique, 1890.

[41] Loc. cit., p. 171.

[42] Loc. cit., Part VII., Book 2, p. 329.

I should certainly agree with the opinion expressed above by Mr. Adams that in the erect position there is a state of least action of the muscles as very little action is to be felt in the erectores spinæ or in the recti abdominis, but by producing a forward movement of the trunk, as by bending the head forward so as to displace the centre of gravity, the erectores spinæ instantly contract and prevent the trunk from moving further in the direction of flexion, whilst the flexors of the recti abdominis relax. In the same way by extending the head backwards the centre of gravity is displaced backwards and the recti abdominis contract and check any further movement in a backward direction, whilst the erectores spinæ are relaxed. But if it be desired to bend the trunk gradually forward the contracted erectores gradually relax and let out the weight of the trunk in the same way as a heavy weight is slowly lowered to the ground by a crane. This action of these muscles can best be illustrated by the upper limb. If when the upper limb is in the horizontal position the forearm be slowly flexed on the upper arm in the vertical plane the flexors of the elbow contract until the forearm is just past the vertical line, when they cease to act and become quite flaccid while the triceps then contracts and lets the forearm gently flex on the upper arm. Conversely, if in that position the forearm be slowly extended the triceps contracts until just past the vertical line, when it ceases and then the biceps and the other flexors contract and let the forearm be gradually extended. So that in flexing the forearm in the horizontal position the first half of the movement against gravity is done by the flexors and the second half with gravity by the extensors. This applies to all the muscles of the body and it may be expressed thus: In every slow movement which is made in the direction of gravity the muscles which act in the direction of the movement are relaxed while their antagonists contract and support the part and if the movement is continued they gradually relax to their full extent.

The contraction of the erectores spinæ when the body falls forward occurs automatically and apparently without any effort of the will and it can be demonstrated by leaning forwards, supporting the weight of the body on one hand. On suddenly taking the supporting hand away the body falls forward and the erectores spinæ instantly contract. The contraction is an instinctive preservative action performed automatically and it takes place unless a voluntary effort is made to inhibit the contraction, when it can be prevented from acting.

In lateral flexion to one side where an obstacle has to be overcome the rectus abdominis and erector spinæ of that side can be felt to contract together with the external oblique and probably the quadratus lumborum, but in inclining the trunk to one side in the direction of gravity where no obstacle has to be overcome the muscles of that side are relaxed and the muscles on the opposite side—the antagonists—contract, just in the same manner as the erectores spinæ contract in flexing the spine forwards.

In rotation of the spine to the right the left external oblique acts, but neither the erector spinæ nor the rectus abdominis can be felt to contract, but whether the internal oblique of the same side (right) contracts it is difficult to say.

While speaking about the movements of advancing or abducting the humerus it was stated that these were attended by contraction of the erector spinæ. This is a point to which attention has been directed by Dr. J. Hughlings Jackson.[43] When a person stands erect so that there is no contraction of the erectores spinæ and then advances one upper limb with or without a weight in the hand to the horizontal line both erectores spinæ contract, and if the advanced arm be slowly carried outwards through an angle of about 45° the erector spinæ on the same side as the advanced arm ceases to contract and on the arm being carried through another 45° the rectus abdominis of the opposite side will be felt to take part in the movement. The question arises whether this contraction of the erectores spinæ is an essential part of the movement of advancing the shoulder in the same way as the right abdominal muscles take part in depressing or adducting the humerus—i.e., whether it is possible to advance the humerus without bringing the back muscles into action. I think the matter can be proved in the following way:—If when the arm is advanced and the erectores spinæ are felt contracting the spine be extended the erectors will be felt to relax when the weight of the trunk behind the centre of gravity just balances the weight of the advanced arm in front, and if now the arm be dropped and then advanced again no fresh contraction of the erectores will be felt. I think that this shows that the contraction of the erectores is not an essential part of the movement of advancing the humerus, as it does not always occur but is of the nature of a postural contraction and only takes place to prevent the equilibrium of the trunk from being disturbed.

This point, whether the erector spinæ muscle of, say, the left side is an essential component of the movement of abducting the right arm, is interesting in relation to hemiplegia. In right hemiplegia where a patient has lost the power of abducting the right arm the question arises as to whether he has any paralysis of the left erector spinæ which, as we have seen, acts when the right arm is abducted. If the action of the erector spinæ were an essential component of this movement of the arm one would expect that when the movement of the arm was paralysed all the components of this movement would also be paralysed, including the erector spinæ, but if the action of the erector spinæ were not an essential component but only acted to preserve the equilibrium of the spine then we should not expect it to be paralysed. I have not examined a sufficient number of cases to say whether the left erector spinæ is paralysed or weakened in right hemiplegia, but Dr. Hughlings Jackson[44] has expressed the opinion that in some cases of hemiplegia the erector spinæ on the side opposite to the paralysis is weaker than on the other side—i.e., in right hemiplegia the left erector spinæ is the weaker—and that the muscle is probably supplied by the direct (ventral) pyramidal tract.

INTUBATION IN CASES OF DIPHTHERITIC LARYNGITIS.

BY H. A. T. FAIRBANK, M.B., B.S. LOND., F.R.C.S. ENG.,
LATE RESIDENT MEDICAL SUPERINTENDENT OF THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

THE following remarks are based upon an experience of 33 cases of diphtheria of the larynx in which intubation was performed admitted to the Hospital for Sick Children, Great Ormond-street, under the care of Dr. A. F. Voelcker, to whom my thanks are due for permission to publish these cases and for his generous assistance. Since the introduction of antitoxin in the treatment of diphtheria statistics of cases of intubation have been almost entirely absent from medical literature in this country. Mr. T. H. Kellock[1] in 1896 published five successful cases and Dr. Conrad Basan[2] in 1901 reported 40 cases, of which only seven were fatal. Dr. Basan's cases seem to have been selected, certain cases being considered unsuitable for treatment by intubation. In the present series of cases nine were fatal—i.e., a percentage mortality of a little over 27. At the Hospital for Sick Children, Great Ormond-street, the practice is to intubate all cases of laryngeal diphtheria in which the signs of obstruction are sufficiently severe to call for immediate relief by operation. Primary tracheotomy is only performed in the few cases in which attempts at intubation prove unsuccessful through inexperience on the part of the operator. An analysis of my fatal cases will show that the list includes more than one hopeless case. Taking Mr. Kellock's, Dr. Basan's, and my own series we have, in all, 78 cases of intubation associated with antitoxin treatment, with a percentage recovery of 76·9. In Allbutt's "System of Medicine"[3] Dr. W. P. Herringham quotes 32 cases of tracheotomy in which antitoxin was also made use of, with a percentage recovery of 81·25; Dr. G. Thornton[4] gives 151 cases with a recovery rate of 67·6 per cent.; and Professor E. Roux[5] mentions 121 cases with a percentage recovery of 62·8. If one may judge from such small numbers intubation would seem to give results as good as, if not better than, those of tracheotomy, and this without any wound in the neck being made. Many writers on this subject have stated that the greater the experience of the operator the better will be his results; and this is certainly my own experience, as the last 15 of my patients recovered. It has been stated that intubation should be performed before tracheotomy becomes justifiable. The two operations might almost be reversed in this statement. Intubation can be performed so rapidly and without an anæsthetic that it can safely be postponed till an operation of some sort becomes imperative. In cases of laryngeal obstruction complicated by pneumonia when there is some difficulty in determining the part played by the two affections in the production of the dyspnœa intubation possesses obvious advantages over tracheotomy.

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[43] Brit. Med. Jour., March 5th, 1892.

[44] Ibid.

[1] THE LANCET, Oct. 3rd, 1896, p. 933.

[2] THE LANCET, July 13th, 1901, p. 76.

[3] Vol. i., p. 755.

[4] THE LANCET, July 8th, 1899, p. 79.

[5] THE LANCET, Sept. 22nd, 1894, p. 675.

Operation.—The operation of intubation has been described as easy and so it is after a little practice. Experience must be gained in the living subject, practice on the cadaver being of limited value only. In a case with marked œdema glottidis, when the tip of the tube has to be squeezed into the larynx by steady but elastic pressure, the operation is by no means easy to the beginner. At the Hospital for Children, Great Ormond-street, the operation is performed with the child lying in bed, with the object of disturbing as little as possible the absolute rest in the recumbent posture so essential in cases of diphtheria. As a preliminary the child's arms should be encased in a piece of thin cardboard rolled into the form of a tube, lined with wool and fixed with a bandage. This simple splint, which should extend from the axilla to a point just above the wrist, effectually prevents the child from reaching the mouth and pulling out the tube, while allowing toys and books to be handled with ease. After the child has been wrapped in a blanket, with the arms by the sides, the head may be slightly extended over a small pillow placed behind the neck; this enables the mouth to be freely opened, even when the child in his struggles endeavours to bury his chin in his chest. The assistant, standing on the left side of the bed, steadies the gag, which is placed on the left side of the mouth, with the left hand while the right is placed on the child's forehead. Practice enables one to intubate with the mouth, less widely opened than was found necessary in one's early cases. The opening of the gag often causes an increase of the dyspnœa and, according to Dr. G. Hunter Mackenzie,[6] may even cause death. Dr. Basan in his interesting paper mentions a case in which the opening of the gag led to the immediate performance of tracheotomy which failed to save the child. The gag should always be closed or removed between the attempts to introduce the tube. The tube, previously sterilised, should be warmed by dipping it in [illegible] hen smeared with white vaseline [illegible] The method of introducing the [illegible] acting as a guide is described [illegible] diseases of the throat and need [illegible] perienced hands the operation is practically free from danger, though death may occur from syncope, as the following unfortunate case shows.

CASE 1.—A girl, aged three years, was admitted with considerable dyspnœa, stridor, and recession of the lower part of the thorax. Antitoxin was administered and a steam kettle and half-tent were ordered. After a few hours, as no relief was obtained and the child's distress was increasing, it was decided to perform intubation. Two unsuccessful attempts were made by a colleague to introduce the tube. After the first the cyanosis had much increased but the child rapidly recovered on closing the gag. After the second attempt the child was nearly black and stopped breathing. I then introduced the tube and commenced artificial respiration. Air could be heard entering through the tube, but the child rapidly paled and died in spite of subcutaneous injections of strychnine and brandy.

This was not a case of pushing membrane down in front of the tube as air passed freely. The child was unable to stand the brief asphyxia induced by the operation. The diphtherial infection in this case was of a severe type, as was evidenced by two other members of the family, who were affected with the disease about the same time, displaying dangerous [illegible] It [illegible] av[illegible] dis[illegible] by Dr. J. B. Ball[7] and Dr. H. G. Turney.[8] The impediments to intubation are great œdema, excessively thick membrane, and spasm of the glottis. The last gives way, as Dr. Basan says, on inspiration if the tube is kept applied to the glottis. In a case of œdema it may be found useful to slip the tip of the left forefinger behind the arytenoids and so to hold the tube against the posterior surface of the epiglottis to make sure that what little force is used is in the right direction. Dr. W. P. Northrup[9] mentions two difficulties in intubation: (1) the point of the tube entering the ventricle of the larynx, and (2) subglottic stenosis, meaning œdema of the mucous membrane in the region of the cricoid ring. The former should not occur and the latter is easily overcome if a suitable tube has been chosen. The same writer advises care in removing the introducer and obturator. The operator must keep these in the middle line or the obturator will catch and perhaps drag out the tube. The tip of the left forefinger should steady the tube meanwhile and should then push the tube home into the larynx. The epiglottis should be felt to flap over and partially to cover the top of the tube, otherwise the latter will be coughed out immediately. The tubular character of the violent respiration following successful intubation is unmistakeable. In its absence the tube may be pulled at once from the œsophagus into which it has certainly passed.

Size of tube.—The sizes recommended by Dr. O'Dwyer for the different years are rather small and easily coughed out. Some continental surgeons who have visited this hospital have agreed with me in this view. In this series of cases, tubes were used suitable, according to the gauge, for children from six months to two years older than the patients operated upon. The bigger the child the bigger, relatively, should the tube be. The size of the child should be considered rather than his actual age. The male larynx is slightly larger than the female of equal age. Mr. Kellock suggests that the larger the tube used the less the mobility thereof and therefore the smaller the chance of ulceration. Dr. O'Dwyer[10] recommends the use of small tubes in cases with extensive formation of membrane, so that tube and membrane may easily be coughed out together. If too large a tube be used it may irritate the larynx and set up a reflex cough. This apparently happened in a hydrocephalic child whose persistent cough was rapidly relieved by the substitution of a smaller tube. [illegible] out once.

The string.—Although [illegible] commend that the string, which should always be attached to the tube during the operation, should be removed after a few minutes if the child seems to be comfortable and relieved of dyspnœa, I strongly advocate its retention as long as the tube is in the larynx. In all my cases the thread was left attached to the tube, brought out of the corner of the mouth, and fixed to the cheek with a piece of strapping. Two objections are urged against the permanent use of a string. First, that it is a source of worry to the patient; this is, I think, exaggerated; children rapidly get used to it. In only one of my cases was there any trouble from the child biting through the string (*vide* Case 4). Secondly, that it may give rise to a *thread ulcer* on the left half of the epiglottis; Mr. B Pitts[11] and Dr. Turney[12] have reported several cases to prove this. In the four post-mortem examinations on cases in this series, and in post-mortem examinations on some non-diphtheritic cases which I have seen, no such ulcer was present. In all the reported cases of ulceration of the epiglottis due to the thread there has also been severe ulceration elsewhere in the larynx and trachea. It would seem that the former only occurs when the latter, and more serious, ulceration is present and that both result from the low-resisting power of the mucous membrane in certain cases. Abrasion of the epiglottis can, I think, be avoided by careful adjustment of the string on the cheek. Any disadvantage referred to the string on this score is more than compensated by its advantages. The string affords a ready means for removal of the tube by medical man or nurse should it become suddenly blocked by membrane. In the following case the prompt action of the nurse gave the child instant relief and perhaps saved his life.

CASE 2.—A boy, aged two and a half years, was admitted on April 12th, 1902, with faucial and laryngeal diphtheria. Croupy cough began the day before admission. Klebs-Löffler bacilli were present. There was some collapse of the upper lobe of the left lung. He was intubated after the trial of a steam-tent. Dyspnœa was completely relieved. Early on the morning of the 13th the child suddenly got black in the face and stopped breathing. As I could not reach the bedside for some minutes the nurse pulled out the tube which was blocked by a membranous cast of the trachea. The cast was coughed out and the child rapidly regained his colour. The tube was replaced although the child was fairly comfortable. On the 15th the tube was removed; there was no further need for it. The child made an uninterrupted recovery. He was fed by the mouth while the tube was in the larynx, the milk being slightly thickened with arrowroot.

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[6] Edinburgh Medical Journal, vol. xxxvi., p. 925.

[7] THE LANCET, Nov. 26th, 1892, p. 1216 (Case 16).

[8] St. Thomas's Hospital Reports, 1889, p. 85 (Case 1).

[9] Brit. Med. Jour., vol. ii., 1894, p. 1572.

[10] New York Medical Journal, No. xvii., p. 23.

[11] THE LANCET, Sept. 23rd, 1893, p. 735 (Cases [illegible]).

[12] Op. cit. (Cases 3, 6, 7).

In this case the tube was replaced because experience had shown that attempts to dispense with the tube in the first 24 hours are generally useless. The general condition of the child made it desirable that he should be spared the strain of a return of dyspnœa. The chief use of the string is that by it the tube can be removed more easily and rapidly and with less damage to the larynx or trachea than by any other means. The objections to other methods of extraction of the tube will be referred to below.

After-treatment.—As soon as the tube is in place the child should be laid on his side to facilitate the escape of mucus, &c., coughed up. The violent coughing which follows the operation soon gives way to peace and quiet and the child is at last able to sleep. With regard to the important question of feeding most surgeons condemn all feeding by the mouth and make use of the nasal tube or rectal alimentation. Feeding by the mouth is possible in a large number of cases and a trial of this method is to be recommended in all. The early cases in this series were fed by means of the nasal tube, but not being convinced of the necessity for this I endeavoured to feed the rest by the mouth, on the principle that the less the child's mode of life is disturbed the less trouble would there be in dispensing with the tube at a later date. Of 19 cases in which feeding by the mouth was attempted eight were fed thus throughout and all recovered. Of the remaining 11 cases six were fed by the mouth for the most part, only a few nasal feeds being found necessary. All these recovered. Of the other five cases in which nasal feeding was necessary throughout or for the greater part of the time the tube was in use, two died. After intubation a child should be fed by the mouth with food suitable to his age and general condition; in most cases this will be fluid, consisting principally of milk. Many children take this well, if given slowly and carefully, a spoon being used for the younger children. If the child coughs much the milk should be thickened with a little arrowroot. If, in spite of thickening the fluids, attempts at swallowing induce more than an occasional cough feeding by the mouth should be discontinued, the nasal method being substituted for it. Raising the foot of the bed so that the child drinks uphill (Casselberry's position) is unnecessary. The worse the general condition of the child the more difficulty will there be over the feeding. Although there may have been no difficulty in feeding a case while the tube was in place, nasal feeding may have to be resorted to after its removal; this occurred in two or three of my cases. No steam-kettle or tent should be used except when the cough is dry and troublesome, when the effect of the steam may be supplemented by giving expectorants.

An important point is to determine when to take out the tube. In the early stages it should be removed once in every 24 hours for cleaning; this also helps the expulsion of membrane. It is difficult to lay down rules for the removal of the tube, as so much depends on the general condition of the patient. I would suggest the following procedure in a case of average severity. The tube should be removed and replaced at the end of 24 hours. The tube should be removed at the end of a further 12 hours and results awaited. The child is unlikely to get dyspnœa immediately. If the tube has to be replaced it should again be removed after 24 hours. If yet again it has to be replaced it may now be left in for 48 hours; this will often enable the child finally to dispense with the tube. Attempts at discontinuing the use of the tube before 36 hours are almost invariably unsuccessful and result in the operation having to be performed in a hurry. Dr. Northrup[13] says that the older the child is the earlier can the tube be left out. In the cases now under consideration, if those that ended fatally and the two prolonged cases referred to below are excluded, we have 22 cases which ended in recovery. The ages ranged from 11 months to ten years and nine months. The average time that the tube was necessary in 13 cases aged three years and under was six days and nine hours. The time in nine cases over three years of age was four days and five hours. These figures, then, bear out Dr. Northrup's statement. Both the prolonged cases were over three years of age. Mr. Kellock says that the condition of the fauces should guide us in deciding when to discard the tube. In his cases the average time was 27 hours. The longest recorded case is one quoted by Dr. A. Brothers[14] in which the tube was borne for 58 days with interruptions to the end of the twenty-first day. In one of my successful cases the tube was only required for 32 hours. The longest case required the tube till the thirty-fifth day (*vide* Case 4). The longest time the tube was in place without being removed was 79 hours; this case recovered. A slight rise of temperature is not uncommon after the tube is first introduced, but this, as a rule, lasts for a day or two only. This pyrexia may be seen in cases which have been in hospital for several hours prior to the operation and in which, therefore, the temperature as taken before intubation is free from any temporary depression such as may be caused by exposure on the way to the hospital or during washing after admission. In such cases there is no collapse of lung or other obvious cause for the rise of temperature. Rapid and easy insertion of the tube does not seem to prevent this rise of temperature, though roughness may, I think, increase it. I suggest that absorption from the larynx is the cause of this pyrexia. A certain amoun of damage to the inflamed mucous membrane can hardly b avoided.

Extraction of the tube.—Reasons have already been given for leaving the string attached to the tube and thus providing a ready means of withdrawing the latter. The stronges arguments in favour of extraction by the thread are th difficulties and dangers attending other methods. Withou the thread we have to resort to the use of the extractor, o to Bayeux's method of "enucleation," or expression of th tube, unless some form of special tube is in use. Th "enucleation" method was used with success by Dr. Ba who cites a case in which a nurse saved a child by removin the tube in this way. This method is not, in my opinion free from danger to the already irritated trachea. The com monest lesion that is found in fatal cases of intubation is a excoriated surface or ulcer on the anterior wall of th trachea opposite the lower end of the tube. This portion o mucous membrane shows signs of injury after the tube ha been in but a few hours, as a case to be quoted later shows In expressing the tube the thumb is placed on the front o the trachea just below the level of the lower end of the tub and is then pressed upwards and backwards, forcing the tub out in front of it. The force must be transmitted to the tub through the portion of mucous membrane alluded to. Th chances of getting deep ulceration at this spot are thu greatly increased. Mr. Pitts and Dr. W. Brook[15] recor a case of death from gangrene of the lung after intuba tion, the only pathological lesion of the air passage being a healed ulcer on the anterior tracheal wal Enucleation is easily performed with the child lying o his side near the edge of the bed and may be useful the string is bitten through. The extractor is a dangerou weapon, requiring the greatest skill and gentleness in it use if serious damage is to be avoided. Every unsuccessfu attempt at extraction with this instrument must leave th larynx injured by its pointed jaws: the screw which regu lates the separation of the jaws limits but little the damag that may be done. As indicating the distress that may b caused by the manipulations of this instrument I may quot a case mentioned by Dr. Mackenzie[16] in which death occurre during attempts at extraction. Various forms of tube hav been invented with grooves cut in the upper end or flaps rubber to enable them to be removed by a long finger-nail special forceps. As far as I know special tubes have n found favour in this country.

Complications.—Vomiting during or after intubation rare and occurred in only one case of my series. Coughin out the tube is seen but rarely if one of a suitable size h been chosen. This accident was met with in four cases, one of which the tube was expelled twice, on the fir occasion with a definite piece of membrane. Another ca had whooping-cough. In the remaining two cases the tu was rather small: one of these was the hydrocephalic chil already referred to, and the other was Case 4. On int bating, the tube may be blocked at once by membrane

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[13] Op. cit.

[14] New York Medical Record, July 27th, 1889.

[15] Transactions of the Medical Society of London, Dec. 1st, 1890.

[16] Op. cit. (Case 10).

[illegible]

CASE 3.—The patient was a boy, aged 14 months; he had had whooping-cough recently, though he had not whooped for a week. He had chronic bronchitis. The boy had been worse for the last four days. On admission the child was very emaciated; croupy cough, occasional stridor, and some recession of the chest were present; there were also signs of bronchitis with dulness at the left apex. He was intubated about six hours after admission. Distress immediately increased and no air entered through the tube. The tube was pulled out by the thread and with it a membranous cast of the upper part of the trachea. The tube was replaced with complete relief of the dyspnœa. The child died about 12 hours later, without having had any further trouble with the tube. A necropsy was refused.

If immediate relief be not afforded by intubation or if the child's distress increases the tube should be removed. Membrane may accompany it or be coughed out soon afterwards. Tracheotomy should not be performed in such an emergency until the effect of removal of the tube has been seen. With the thread attached it is a question of a moment's delay only. Membrane may block the tube at any moment during the first few days of intubation. This occurred in four cases of the present series. In one the tube was coughed out and in the other three it was pulled out by the thread. It is advisable to explain to the nurse in charg[illegible] of the t[illegible] loose in[illegible] is a diff[illegible] following three signs of the presence of loose membrane: (1) croupy cough although the tube is in the larynx; (2) flapping sound; and (3) sudden obstruction to the outgoing air, especially during coughing. To these may be added recurrent attacks of urgent dyspnœa of short duration, caused by the loose membrane being jammed in the tube on each occasion. In one of my cases complete blocking of the tube, necessitating its removal, was preceded by two short attacks of dyspnœa. The tube should be pulled out in the hope that the membrane may follow it. Dr. Northrup recommends short tubes of large calibre for use in these cases. The same writer says that a piece of membrane may act as a ball-valve at the lower end of the tube and so give rise to emphysema of the lungs. Dr. O'Dwyer is said, in his first 209 intubations, to have met with three such cases, all of which ended fatally. Mr. Pitts[17] says that Mr. H. Stansfield Collier has also met with cases of rapid distension of the lungs. I have met with one case which, I think, may have been of this nature, although at the time the case was not considered to be one of diphtheria.

Excessive coughing may be associated with the expectoration of thick, tenacious mucus which is expelled through the tube with difficulty and may give rise to definite obstruction. Of more common occurrence is the presence of profuse watery expectoration which keeps the child constantly at work trying to rid himself of the froth; frothy mucus literally pours from the child's mouth. This condition is associated with great restlessness. By laying the child well over on his side and frequently clearing the throat with a swab relief may often be afforded. If this prove of no use the foot of the bed may be raised to help the escape of mucus and a subcutaneous injection of atropine may be given, a little morphia being added if the child be very restless. The following case may be given in detail as an example of the condition just referred to and as presenting other points of interest.

CASE 4.—The patient was a boy, aged five and a half years. There was a vague history of increasing dyspnœa and vomiting for the previous 36 hours. On admission to the Children's Hospital on May 11th, 1902, he was absolutely [illegible] th tonsils. He was intubated [illegible] muco-pus shot into the mouth. (No pus was seen after this.) [illegible] silk thread was bitten through [illegible] be was removed by means of [illegible] and was replaced with fresh silk, but this shared the same fate. Silkworm gut was then tried on the other side of the mouth, but this was divided in a few minutes. Four strands of silk were then used with success. 9000 units of antitoxin were given. The patient was very pale and restless on the night of the 11th. Morphia and atropine [illegible] on the 12th. Rattling in the throat [illegible] quantity of mucus being enorm[illegible] was raised and the injection of atropine was repeated. Klebs-Löffler bacillus was present in cultivations from the throat. The tube was removed, cleansed, and replaced. On the 16th the cough was better. The tube had been removed in the afternoon of the 14th but had to be replaced on the 15th; on the 16th it was removed. On the 18th there was pneumonia at the left base. There was some recession of the lower ribs, apparently due to the condition of lung. On the 19th there was a patch of consolidation at the angle of the right scapula. On the 21st the tube had to be replaced as the recession became much worse. Considerable relief followed. On the 22nd the lungs were better and the tube was removed. On the 26th the tube had to be re-inserted. On the 27th the tube was coughed out. On June 11th the child had worn the tube intermittently since the previous note and still required it in spite of being under the influence of morphia and the bromides which were administered before the tube was removed. The child could do without the tube for periods varying from 50 minutes to four days, after which he suddenly got dyspnœa, requiring immediate intubation. The dyspnœa (? spasm) came on quite suddenly, often on waking; in from one to three minutes he was livid. Inhalations of chloroform were useless; there was no time to get the boy under the influence of the anæsthetic when once the spasm had commenced. There were still some signs of pneumonia at the left base. The tube was removed on the night of the 13th. On the next morning there was some distress which passed off after twice swabbing the larynx with a 5 per cent. solution of cocaine and quieting the boy by talking to him. No further trouble with the breathing occurred. The tube had been in use, with intervals, for 35 days. He eventually made a good recovery.

This case seems to be an example of ulceration of the larynx which recovered under intubation and without tracheotomy being performed. The child was comfortable without the tube from the sixth to the eleventh days and from the thirteenth to the sixteenth (*vide* chart). Some abrasion or ulceration must have been present. During these days the temperature was raised, but the condition of the lungs might account for this. During the last fortnight of the period of intubation the temperature was normal, so that the ulceration was probably slight. The sudden spasm of the glottis in this case indicated the presence of ulceration, though partly depending on the nervous temperament of the child. Fright is often the determining cause in such cases. I have seen a child in whom intubation tubes were being used for chronic stenosis of the larynx get livid because I began to leave the ward immediately after removing his tube instead of staying with him as my custom was. Words are of more use than drugs in these cases; sedatives seem to be of little use, though they should always be tried. As regards the use of cocaine, applied locally in these cases and in those with gradually increasing dyspnœa due to œdema, it is difficult to estimate how much of the improvement should be attributed to the drug. Of two cases in which suprarenal extract was tried with the object of reducing the swelling of the mucous membrane one was relieved. A mixture of cocaine and suprarenal extract might be of more value.

Severe ulceration of the laryngeal mucous membrane is uncommon nowadays. Superficial ulceration is probably present in the cases in which one finds difficulty in discontinuing the use of the tube. The signs of deep ulceration are free bleeding from the larynx during the introduction or removal of the tube, staining of the tube, rapid and repeated appearance of œdema or spasm of the glottis after removal of the tube, tenderness over the thyroid cartilage, and pyrexia. Œdema of the glottis coming on some days after removal of the tube is a certain sign of ulceration. Dr. Turney records a case of œdema coming on 15 days after removal of the tube. At the necropsy ulceration of the larynx was found. If some or all of the above signs are present and yet the child seems to be remarkably well and certainly "holding its own," intubation may still be continued. The general condition of the patient should be our guide when considering the advisability of resorting to tracheotomy. The two long cases already referred to, requiring a tube till the twenty-third and thirty-fifth days respectively, showed some signs of ulceration. Intubation was persisted in because the general condition remained unaltered; the result in both cases justified the treatment. If a child with ulceration of the larynx begins to go downhill tracheotomy should be performed at once The formation of an abscess in front of the larynx or the trachea calls for immediate tracheotomy. Scarlet fever occurring in the course of an intubation case indicates tracheotomy, especially if the child's condition be grave. In my series three secondary tracheotomies were performed, but I am now convinced that in each instance the operation was unnecessary. The first was done because the child was not doing well. The child died with a temperature of 107·8° F. 24 hours after admission. Post mortem broncho-pneumonia was found; there was membrane in the larynx but none in the trachea. In the second case tracheotomy was performed by a colleague in my absence after attempts at re-intubation had proved unsuccessful; recovery followed. The third case was a very severe one, complicated by broncho-pneumonia and anuria. Tracheotomy was performed on the third day on account of the great recession of the lower ribs and sternum, the intubation tube being in place. The coughing set up by the introduction of the tracheotomy tube relieved the child for a short time only; in a few minutes the recession was as bad as ever and was obviously due to the lung condition which proved fatal. No membrane was found in the trachea I believe that tracheotomy is very rarely required after intubation. A large number of secondary tracheotomies have been performed owing to a want of experience on the part of the operator and through a natural fear that the best was not being done for the patient. Mr. Pitts,[18] writing in the pre-antitoxin days, stated that tracheotomy following intubation was very fatal and cited 18 such cases treated at St. Thomas's Hospital, 16 of which proved fatal. Mr. Kellock informs me that out of 14 similar cases at the Hospital for Sick Children, Great Ormond-street, in the years 1890–92 11 patients died. The severity of a case, no doubt, leads to the performance of tracheotomy; still, I believe that in the great majority of cases secondary tracheotomy diminishes the child's prospects of recovery. As to the occurrence of pulmonary complications, signs of which develop after intubation, pneumonia occurred in three cases, two of which ended fatally. In both of these fatal cases death occurred without a tube being in the larynx, the obstruction having been cured. In two other cases bronchitis developed but did not interfere materially with convalescence. Pneumonia, resulting from milk and other food being inhaled through the tube, is regarded by some as common. This does not appear to be the case, though all nourishment is given by the mouth.

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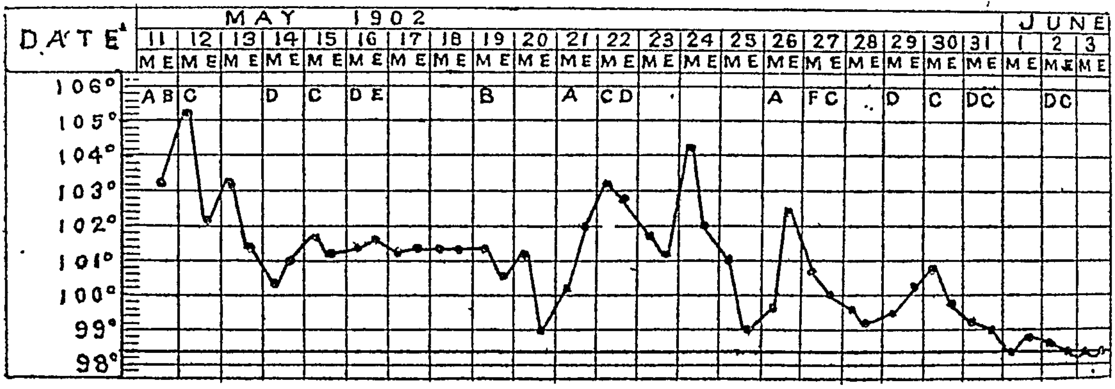
[17] Brit. Med. Jour., vol. ii., 1893, p. 175.



A, Intubated. B, Nasal feeding. C, Re-intubated. D, Tube removed. F, Fed by mouth. F, Tube coughed out.

A study of the fatal cases is of some interest. Of the nine fatal cases a post-mortem examination was permitted in only four. Of the other five cases, the first was a baby, aged 10 months, admitted for abscesses on both sides of the neck. Six days before death signs of pneumonia appeared. Laryngeal obstruction came on rapidly and intubation was followed by considerable relief, but the child died 24 hours later. The second case has already been mentioned (*vide* Case 3). Broncho-pneumonia developed after whooping-cough and diphtheria ended the case. The child lived for about 12 hours after intubation. Both these cases were really hopeless from the first. In the third case, the patient, aged 20 months, was admitted with nasal, faucial, and laryngeal diphtheria, as well as bronchitis. The child lived till the thirteenth day, the intubation tube being discarded on the eleventh. The heart was considerably dilated and the child gradually sank. The fourth case, a baby, aged 18 months, with severe hydrocephalus, required the tube till the eleventh day, by which time definite signs of pneumonia had made their appearance. The patient died on the fifteenth day with general rigidity and retraction of the head. The remaining case was Case 1, in which the patient died during the operation of intubation. Of the cases in which post-mortem examinations were made the first was admitted with broncho-pneumonia and laryngeal diphtheria and lived one day. Post mortem broncho-pneumonia was found; there was membrane in the larynx and for a short distance below; there was no ulceration; the heart was dilated. In the second case diphtheria occurred at the end of a severe attack of whooping-cough, during which signs of tuberculosis of the lungs appeared. The child died on the day after intubation. Post mortem general tuberculosis was found; there was membrane in the larynx and trachea; a small "intubation ulcer" was found on the anterior tracheal wall opposite the lower end of the tube. The child's serious condition would account for the rapid formation of an ulcer in the trachea. In the third case the patient, aged 17 months, developed pneumonia on the fourth day and lived till the fourteenth, eventually dying from pneumonia; the tube was used till the tenth day. Post mortem pneumonia of the right lung was found; some clear fluid was present in the left pleural cavity; there were no tubercles. In the larynx a deep ulcer with flat injected edges was found in the mid line in front just below the cords. The floor of the ulcer was formed by the crico-thyroid membrane. The usual "intubation ulcer" in the trachea was also present. In the last case the patient died three days after admission from anuria and broncho-pneumonia. Post mortem broncho-pneumonia was found; the mucous membrane of the larynx was distinctly thickened and presented tracts of superficial ulceration; there were no membrane in the larynx or the trachea and no ulceration in the trachea; the tracheotomy wound passed through the usual situation of the "intubation ulcer." Evidences of tubercle were found in the mesenteric glands but not elsewhere. In many of these cases we can, I think, justly conclude that the fatal result could not have been avoided had primary tracheotomy been performed.

In medical literature of the pre-antitoxin days numerous cases of severe ulceration are found; such cases are fortunately rare nowadays. Though no such case is found in this series, I have met with one or two ugly results from intubation in non-diphtheritic cases. The few results given above do not give a correct idea of the damage that may occasionally be done by an intubation tube. Abrasion or ulceration of the mucous membrane can occur very rapidly in debilitated patients. Dr. Turney[19] gives a case of commencing excoriation after eight hours and another of extensive ulceration after 36 hours of intubation. Cases in which the tube slipped through the ulcerated larynx and lodged in the bronchus or the trachea are given by Dr. Turney[20] and Dr. W. W. Ord.[20] The latter diagnosed the accident as the child could phonate, although the tube was supposed to be in the larynx; difficulty in extraction by means of the string confirmed his diagnosis. Stenosis of the larynx, partial or complete, is recorded by Mr. Pitts and Dr. Brook, Dr. Basan, Dr. Chavasse,[22] and Widerhoffer.[23] Dr. Mackenzie gives a case of abscess over the front of the larynx. I have seen a non-diphtheritic case in which an abscess gradually developed over the front of the trachea, although the tube had only been in use for 18 hours. The abscess extended from the cricoid to the thymus gland. Swallowing of the tube has occurred in the practice of several writers. The tube is always passed without trouble. In a case of undiagnosed retro-œsophageal abscess two tubes, of different sizes, were used. At the post-mortem examination two excoriated patches were found on the anterior tracheal wall corresponding to the lower ends of the two tubes. The tubes were both in use for 24 hours. Some excoriation was present in the centre of the posterior surface of the epiglottis. The voice does not seem to be altered for any length of time after intubation. Speech rapidly becomes distinct, though some huskiness may remain for several days or even weeks. In two cases, intubated for three and four days respectively, the voice was still weak three weeks after removal of the tube. The chances of permanently damaging the larynx are small indeed. The boy who required the tube for 35 days (Case 4) recovered the use of his voice completely.

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[18] Ibid.

[19] Op. cit. (Cases 4 and 5).

[20] Op. cit. (Case 6).

[21] St. Thomas's Hospital Reports, 1869, p. 65.

In conclusion, I may state that nearly all the above cases were proved to be diphtherial in origin by bacteriological examination and that in each of the cases in which such examination gave negative results definite membrane was discharged from the larynx or trachea. In this country sufficient attention has not been given to intubation. Its employment in a few more hospitals would, I think, eventually lead to its adoption in all.

Harley-street, W.

TWO FATAL CASES OF PARTIAL THYROIDECTOMY,

DEATH RESULTING IN ONE CASE FROM INSUFFICIENCY OF THYROID SECRETION AND IN THE OTHER FROM ITS EXCESSIVE ABSORPTION.

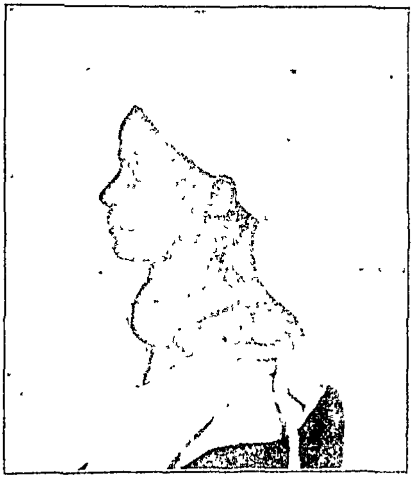
By FRANK COLE MADDEN, M.B., B.S. MELB., F.R.C.S. ENG.,
PROFESSOR OF SURGERY AT THE EGYPTIAN GOVERNMENT SCHOOL OF MEDICINE; SENIOR SURGEON TO THE KASR EL-AINI HOSPITAL, CAIRO.

GOITRE is a very common condition in Egypt and usually has attained such a size before advice is sought that partial removal holds out the only hope of relief from the symptoms which, however, in almost all cases are those of inconvenience from the great size of the tumour and not of injurious pressure upon the trachea, the veins and nerves [illegible] the neck, or any other important structures. In spite of [illegible] difficulties [and dangers of the operation, such as hæmorrhage, interference with the vagus nerve, &c., the patients usually do well and only very rarely exhibit any untoward post-operative complications. The cases which I wish to record are very good illustrations of the possible complications of the operation, depending entirely upon the condition in which the thyroid gland is left after it.

CASE 1.—The first patient was an Egyptian girl, aged 12 years, who was a deaf-mute but who in other respects appeared to be quite intelligent and well developed. As is unfortunately only too common with Egyptians of even average intelligence, no satisfactory history as to the duration and rate of growth of the tumour [illegible] obtained, the only relative of the patient living at [illegible] from Cairo. From an examination o[illegible] (Fig. 1) it will be seen that the appearances were those of a typical tri-lobed goitre, which was not adherent either to the skin or to the deep structures of the neck. There was no dyspnœa or dysphagia or other sign of pressure, but all the movements of the neck were considerably interfered with owing to the size of the goitre.

The removal of the mass after the skin of the front of the neck had been raised in one large apron-shaped flap presented no special difficulty; indeed, it was so easy to shell out all three lobes that I was much tempted to remove them entirely. However, a piece of the isthmus of the size of a walnut was left in the middle line of the neck, and after careful ligature of all the divided vessels the skin flap was sutured with a continuous silk suture and the whole wound was thus closed without drainage. Two days after the operation the patient had a sudden attack of dyspnœa and presented all the symptoms of severe laryngeal spasm. The spasm subsided after a few hours and did not recur until many days later. On the following morning all the signs of early and not very marked tetany were observed in the hands and feet and a thyroid tabloid of five grains was ordered to be given twice a day. During the next two days the tetany persisted and became much more marked and then it gradually disappeared.

FIG. 1.



Showing multiple-lobed goitre.

It was noticed that the patient had become very pale and anæmic since the operation, but there was no sign of myxœdema anywhere, either at this time or subsequently. In spite also of forced feeding she became more and more [illegible] continued for a week, [illegible] other tonics were [illegible] that the symptoms [illegible] due to the inability of the remaining piece of thyroid gland to supply sufficient secretion for the needs of the organism for the first few days after the operation—that is, until it had become accustomed to the extra work thrown upon it by the removal of the rest of the gland—and that coincident with the disappearance of the tetany and the absence of other symptoms of insufficiency it had then taken over its new duties and was now supplying all the secretion that was necessary. However, on the twelfth day the tetany returned and the tabloids were again exhibited but with little or no effect; for, though the spasms were not so frequent, they were more severe than before and were confined mainly to the extremities but with [illegible]atory seizures The patient was bathed in [illegible] the attacks and the emaciation and general [illegible] more and more marked. Finally, 24 days after the operation she died after a very severe and almost general seizure which particularly involved the respiratory muscles.

The cause of death was post-operative tetany of the respiratory muscles This tetany in the early stage resembled hysteria and were it not for the attendant circumstances of the case it might easily have been mistaken for it; while later the spasms became so severe as to simulate tetanus At the post-mortem examination no trace of thyroid substance could be found in the neck and it was quite obvious that the small piece that had been left at the operation had undergone complete atrophy. No lesions were found in any other organ. It is to be regretted that thyroid medication was not pushed to the extreme limit of safety in this case as it must be confessed that with the present facilities for the introduction of thyroid material into the body post-operative tetany ought to be a curable complication.

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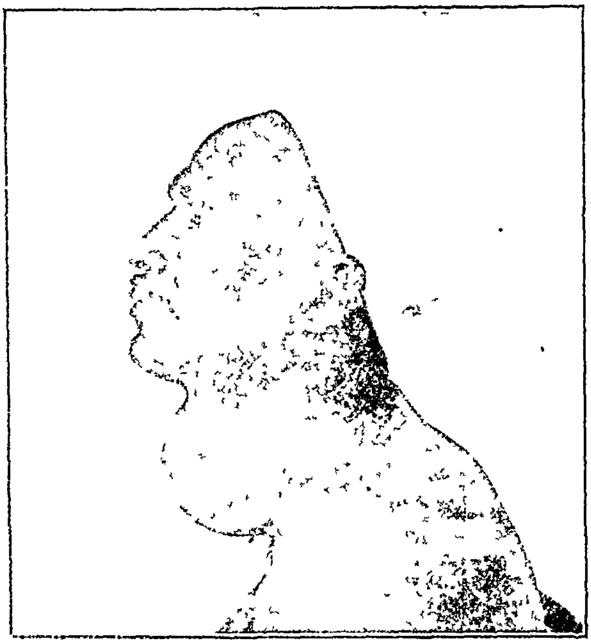
[22] Brit. Med. Jour., vol ii., 1899.
[23] Naturforscher Versammlung in Bremen, 1890

CASE 2.—The second case was the exact antithesis of the first and was that of a goitre of eight years' standing in a blind man, aged 24 years. As the illustration shows (Fig. 2) and as subsequent operation proved, the enlargement was confined entirely to the isthmus. It had increased rapidly in size during the last three years and was producing a certain amount of difficulty in breathing owing to direct pressure upon the trachea.

FIG. 2.



Showing single-lobed goitre.

Removal was effected in the usual way but the operation was rather difficult on account of the extreme vascularity of the mass and its firm attachments above. The only points at which the thyroid substance was divided were at either side, a very narrow pedicle connecting the enlarged isthmus with two normal lateral lobes. The structure of the mass was that of an ordinary parenchymatous goitre with considerable cystic change. Three layers of silk sutures were put in, one for the deep cervical fascia, another to draw the edges of the sterno-thyroid and sterno-hyoid muscles together in the middle line, and the third for the edges of the skin flap. A packing of sterilised gauze was placed in the cavity deep to the cervical fascia, the end being brought out of the lower end of the flap. The operation took about an hour and the patient was rather collapsed after it though not a great deal of blood had been lost. Almost as soon as the effects of the anæsthetic wore off he began to be restless and excited and both his pulse and respiration became very rapid. He was given normal saline solution by the rectum and strychnine and morphia hypodermically but without much effect, for the same evening his pulse was 144, his respirations were 52, and his temperature was 102° F. No physical signs either in the heart or the lungs could be found to account for these symptoms and Mr. Ll P. Phillips, the resident surgical officer of the Kasr-el-Aini Hospital, regarding the case as one of thyroid toxæmia very rightly removed the packing and washed out the whole cavity with saline solution and then put in a large drainage-tube. The patient's condition did not appreciably improve during the night and next morning he was drowsy and semi-conscious and the temperature reached 103°, while the pulse and the respiration maintained their former rapid rate He was then transfused by the veins with one and a half litres of normal saline solution and the wound was freely opened up and well irrigated. All to no purpose, however, for, although the restlessness was controlled by morphia, his general condition did not improve and he died 28 hours after the operation

No post-mortem examination was allowed but it seems reasonable to conclude that the cause of death was the sudden introduction of thyroid secretion into the system, absorption taking place from the cut surfaces of the isthmus, the extreme vascularity of the part accounting for the rapidity of absorption. The symptoms were not those of collapse but were exactly similar to those observed when the administration of thyroid extract has been pushed to a severe degree. In a fairly large series of cases of partial thyroidectomy I have never met with either of these complications before and they illustrate very well the opposite extremes of the possible dangers due to interference with the structure upon which we are operating.

My only other fatalities have been one case from hæmorrhage, eight hours after operation—due entirely to the neglect of a native attendant—and another from a condition which I may call "kismet" and which it will be difficult for those who work entirely among Europeans to understand. The patient was an old woman who, three weeks after the operation and when she was ready to leave hospital, refused to go out as she had no home to go to and announced her intention to die, which she did in spite of all efforts to keep her alive by food, strychnine, and stimulants. She gradually "faded away" and nothing was found post mortem to justify her dying. I have met with this "death by willing" on other occasions in hospital practice in Egypt. These cases cannot be included in the category of those in whom "the operation was a perfect success but the patient died," for neither the operation nor the condition that necessitated it was in any way responsible for the death. They were typical instances of the power of dying at will.

Cairo.

ON THE DANGER OF RAILWAY TRIPS TO HIGH ALTITUDES, ESPECIALLY FOR ELDERLY PEOPLE.[1]

BY THEODORE ZANGGER, M.D.,
LATE ASSISTANT PHYSICIAN, UNIVERSITY HOSPITAL, ZÜRICH.

OUR Alps claim their annual victims. Not only thoughtless youths but careful men who have arrived at the age of discretion succumb to accidents of various kinds, so that the deaths from such causes, often in themselves avoidable, amount to 60 per annum. Nay, even sober-minded grey-haired men who have many years since dismissed any thought of Alpine climbing, and who rightly condemn those who hazard their limbs or even their lives by undertaking difficult ascents without guides,—even these may inadvertently run great risks, as will presently be shown The great majority of the public, and even some medical men, ignore the various dangers that menace the lives of elderly persons undertaking mountain ascents—say, at elevations higher than 3300 feet above sea-level. These dangers may be summed up in two words, apoplexy and heart failure ; but instead of the latter expression it is better to use the two medical terms "thrombosis of the heart" and "embolus of the lung." The explanation of the matter is extremely simple. On the one hand, many persons have a difficulty in realising that they are getting on in years, while, on the other hand, degenerative processes may develop in the heart without causing any symptoms, and in the case of such patients incautious mountain ascents are not only dangerous to life but may even have a fatal termination. I wish to call particular attention to the circumstance that such seizures do not occur exclusively during the stay of the patients at the high altitude but may come on, either slowly or abruptly, one, two, and even three days after they have returned to the low ground. The general public, and sometimes also the medical profession, therefore fail to perceive that there is a direct connexion between the catastrophe and the high altitude. Not a few medical men are of opinion that there cannot be any such causal connexion when several days intervene between the stay at the high altitude and the onset of heart failure or apoplexy, but they are certainly in error, though I quite recognise the great difficulty of supplying direct and convincing proofs in these cases. Nothing but the careful observation of clinical facts will clear this matter up and I trust that the present contribution to the subject may stimulate others to similar investigations. Further physiological and clinical research may then succeed in clearing up some points which are as yet not fully understood.

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[1] Abstract of a paper read before the Medical Society of Zürich on Nov. 15th, 1902.

It is well known that visits to high altitudes endanger the physical welfare of patients suffering from diseases of the circulatory and respiratory system, but it is very difficult to formulate warnings which may be of general applicability.

As regards the altitude, a difference of from 1300 to 1600 feet may act detrimentally on patients suffering from the first symptoms of heart failure, whether dependent on the condition of the endocardium or the myocardium. As far as my experience goes, this altitude, as in the case of the Uetliberg (2850 feet), situated 1500 feet above Zürich, is less harmful in such cases than the sudden and considerable differences of temperature which are more liable to occur on an exposed peak than in a valley of the same altitude. My experiences derived from Adelboden (4400 feet) go to prove that such a height cannot be considered a matter of indifference, even though the place is well sheltered by surrounding mountain peaks. Patients suffering from disease of the valves or muscle of the heart or from arterio-sclerosis with whom a residence at that elevation did not agree improved immediately if I sent them down only 1000 feet lower. It therefore seems advisable on practical grounds to fix the upper limit of indifferent altitudes at 1000 metres, or about 3300 feet above sea-level. As soon as altitudes of 2000 metres or more (over 6600 feet) are in question it is necessary to give more attention to the contra-indications and to be much more careful with the patients. At such heights disagreeable or even alarming symptoms soon make their appearance, and even become intense, in patients suffering only from the initial stages of vascular disease.

Questions relating to the limits of age present similar difficulties. Only a careful examination of each patient will enable the practitioner to give a proper opinion, for vascular changes and degenerative processes in the heart may be established soon after 30 years of age. I gather from a small treatise by Dr. Hampelin[2] that of upwards of 100 cases duly examined post mortem 25 per cent. were at ages between 30 and 40 years, 25 per cent. were between 40 and 50 years, and 33 per cent. were between 60 and 70 years. However, this refers to severe cases which ended fatally, and especially to the labouring classes, who generally have much more strain put on their vascular system than the well-to-do middle and upper classes, whereas it is with the latter that the present paper is principally concerned. As a rule vascular changes are *in these cases most frequent* between the ages of 50 and 70 years. It must be remembered that on the one hand clinical symptoms may be absent where a post-mortem examination reveals serious and important anatomical lesions and that, on the other hand, the results of the pathological investigation, even when duly aided by the microscope, may not in the least correspond to the severity of the symptoms observed during life. Practically it is only possible to estimate the degree of loss of function (*den Grad der Functionsstörung*) and to draw conclusions as to the soundness of the muscle of the heart from its capacity or incapacity for work.

I have already in THE LANCET[3] referred to the danger of high altitudes for patients affected with arterio-sclerosis and have given indications to guide the practitioner when asked for advice as to a stay at an Alpine health resort. My principal *object in the present communication is to* call attention to the danger that elderly people may incur by making railway journeys up to high altitudes. In my paper just mentioned the following sentence will be found: "Rapid ascents to a high altitude are very injurious to patients with arterio-sclerosis and the mountain railways up to 7000 feet and 10,000 feet are positively dangerous to an unsuspecting public, for many persons between the ages of 55 and 70 years consider themselves to be hale and healthy and are quite unconscious of having advanced arterio-sclerosis and, perchance, contracted kidneys." There are in Switzerland quite a number of mountain railways carrying passengers up to altitudes over 6000 feet. I have personal experience of detrimental effects produced on elderly people as soon as this limit is passed. Let me give a list of these mountains. Rigi, 5900 feet; Stanserhorn (on Lake Lucerne), 6330 feet; Schynige Platte (above Interlaken), 6660 feet; Rochers de Naye (above Montreux), 6707 feet; Scheidegg (above Grindelwald), 6770 feet; Pilatus (near Lucerne), 7010 feet; Brienzer Rothhorn (over the Lake of Brienz), 7408 feet; and Gornergrat (above Viége-Zermatt in the Valais), 9905 feet. The railway up the Jungfrau reaches at present an altitude of only 9233 feet, but next year the station Eismeer (10,332 feet) and later the stations Mönch (11,000 feet) and Jungfrau (13,366 feet) will be reached.

Notwithstanding diligent search I have been unable to discover any previous publication referring to the effects of *rapid* changes of altitude on elderly people, for balloon ascents are generally made by comparatively young or healthy individuals. The opinion has almost universally prevailed that the mere ascent to such high altitudes even in complete absence of bodily exertion must act detrimentally on human beings. This view was based on observations made during mountain ascents (as in the Himalayan Mountains), during balloon ascents, and during experiments on the effects produced by artificially rarefied air (i.e., the pneumatic cabinet). The so-called "mountain illness" (*Bergkrankheit*) which attacks healthy individuals who reach an altitude of about 10,000 feet is well known and has been carefully studied. I do not intend to enter into details here but am obliged to mention that this "mountain illness" is not only accompanied but produced by slight dilatation of the right ventricle of the heart; it is thus but a forerunner of the typical case which I shall hereafter describe. A physiologist of note, Professor Kronecker of Berne, has summarised his opinions on the subject of "mountain illness" as follows[4]: "Reduction of barometric pressure leads to congestion (Stauung) of the blood-vessels in the lungs; this impedes the flow of blood to the lungs and *causes dilatation of the right ventricle of the heart.*" When the Swiss Government was asked to sanction the making of a railway up the Jungfrau they appointed a scientific committee to examine the question, Professor Kronecker being one of the members. The summary of this report, which was published at Olten in 1890, was to the following effect: "From a scientific point of view it is not advisable to grant this application until the railway company has proved in a satisfactory manner that such ascents can be made without detriment to health." It must be admitted that the carefulness of the Swiss Government was very praiseworthy.

Mr. Guyer-Zeller who had made the application immediately set to work to collect the necessary evidence. I will [illegible] seven persons, some of whom were inhabitants of the valley of Zermatt (5314 feet) and some of Berne (1765 feet), were carried in chairs up to the summit of the Breithorn (13,685 feet). They accordingly made the ascent without physical exertion. Their circulatory and respiratory organs were carefully examined on the day before the ascent and again on the summit. I must lay especial stress on the fact that the people from Berne had spent at least 24 hours at Zermatt and had thus had the benefit of a short period of acclimatisation. The altitude that has to be taken into account is therefore the difference of altitude between the Breithorn and Zermatt, a difference of only 8371 feet and not the difference of altitude between the Breithorn and Berne, a difference of 11,920 feet. I may also mention that these 8371 feet were traversed in eight and a half hours, whereas the difference of altitude between Visp and Gornergrat (7740 feet) is now traversed by train in little more than half that space of time. This is of practical importance. Professor Kronecker came to the following conclusions: "Healthy persons do not suffer from being conveyed without any exertion on their part to an altitude of some 12,000 feet, but as soon as any, even slight, muscular action is required of them distressing, or even dangerous, symptoms of circulatory trouble supervene." He also made the following recommendation which, in my opinion, is an excellent one: "A medical man should be stationed at Scheidegg (6770 feet) who would examine any passengers at [illegible] the [illegible] the [illegible] able [illegible] observations that comfortable and leisurely conveyance (without any exertion made by the person conveyed) from Zermatt to the Breithorn, a difference of altitude of 8371 feet, during mild weather and on a day almost free from wind caused an increase of the pulse-rate, a decrease of the blood pressure, and a decrease of the vital capacity (*Vitalcapazität*) of the lungs, accompanied by obvious cyanosis. Slight exertion, such as walking 20 paces on level ground, caused the pulse-rate of the most robust guides to rise from 100 or 108 to 120 or 140 and caused that of the persons who had made the ascent in chairs to jump up to 160 per minute. These facts being known it becomes easy to understand that mountain ascents by railway may be productive of serious injury to elderly persons affected with arterio-sclerosis or degeneration of the heart, and it is no longer possible to maintain that, in contra-distinction to active climbing, the mere conveyance of persons (without exertion on their part) to high altitudes is devoid of ill-effects. Muscular activity undoubtedly puts an extra strain on the heart, but that is not the aspect of the case which is at present under consideration. The class of individuals referred to could not walk up a slope for half an hour without being brought to a standstill by symptoms of dyspnœa, palpitation, vertigo, or pain in the region of the heart. Such patients imagine that mountain railways are a great convenience, but my opinion differs from theirs, as will have been seen. Entirely without reference to the cases in which definite heart disease has been diagnosed I recommend that patients with weak hearts should do something by way of testing their vascular and respiratory system before venturing on an excursion up a mountain.

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[2] Ueber Erkrankungen des Herzmuskels, Stuttgart, 1892.

[3] THE LANCET, June 17th, 1899, p. 1628.

[4] Das Project der Jungfraubahn, Zürich, [illegible]

On Dec. 21st, 1894, the Swiss Government granted the permission which enabled Mr. Guyer-Zeller[5] to commence the remarkable and gigantic work of making a railway up the Jungfrau. Nothing can be said against the granting of the permission, for all the evidence available up to the present time goes to prove that healthy persons can by this means enjoy the splendour of Alpine scenery, not only without much fatigue or expense, but also without detriment to their physical condition. It would be quite unreasonable to denounce the making of such railways merely on the ground of the risk that might be incurred by feeble and elderly persons. It is the duty of the medical profession to warn the public of possible risks and the public thus warned ought to be on their guard. By making their views widely known through the medium of the press the medical profession have fulfilled an obvious duty. It must also be remembered that the strictly medical side of the subject requires further elucidation and theoretical inferences will not be of much assistance in this. Descriptions of cases which have been carefully observed are indispensable and I must appeal to my fellow practitioners in Zermatt, Grindelwald, Lauterbrunnen, Lucerne, and other places, for such details, which they will be easily able to furnish when once their attention has been called to the matter. I shall give an account of one typical case which will serve to illustrate a dozen other instances that have come under my notice presenting symptoms sometimes even more acute but less prolonged.

Persons already recognised to be suffering from heart disease scarcely need to be warned against mountain ascents. They all know, or at least have every opportunity of knowing, the risks which they run, but it is right that medical practitioners, or rather the medical press, should insist on the necessity for caution in the case of elderly persons whose vascular system is to some degree impaired, although to all appearance they may be in good health. Such patients—for they are patients—never think of being medically examined before undertaking an ascent; they make the venture on the spur of the moment, without a thought of the possible consequences, and they even neglect to break their journey for a time at an intermediate station. Venous stasis (*venöse Stauung*) becomes slowly but surely established though quite unperceived, dilatation of the right ventricle of the heart ensues, and the blood pressure undergoes serious, perhaps rapid or even prolonged, changes. Subjective symptoms may be absent during the railway journey or during the period of stay at the summit, but if they show themselves the patient will do well to heed the warning. The heart brings its latent reserve force (*seine latenten Spannkräfte*), as Rosenbach calls it, to the front, and as soon as this is exhausted, whether at the high elevation or on the low ground, the catastrophe may ensue. It often happens that it is only after the descent that the vascular system is observed to have been overstrained and either temporarily or permanently damaged. Mountain ascents by railway involve an element of danger for all those who cannot walk up a gentle slope for an hour without feeling disagreeable symptoms, such as shortness of breath, giddiness, &c., whether the cause depends on alterations in the blood (anæmia), in the respiratory organs (emphysema, bronchitis), or in the vascular system (arterio-sclerosis, myocarditis). The majority of these ailments are met with in persons over 60 years of age. It would be going too far to forbid such persons to undertake railway excursions of this kind, but at least a warning ought to be given them and it is advisable for them to be careful. Let them commence with trial ascents of 3000 or 4000 feet above the valley before venturing up to greater elevations. In any case they must "acclimatise" themselves or become accustomed to the reduction of pressure by stoppages at intermediate stations; for instance, let them stay two or three days at Zermatt (5315 feet) before undertaking a trip up to the Gornergrat (9905 feet). Let them refrain altogether from going higher up the Jungfrau than 9000 feet, and before attempting this experiment let them become "acclimatised" by a stay at Grindelwald (3414 feet) and Scheidegg (6770 feet). Persons over 60 years of age should never undertake such trips unless with the consent of a medical man.

It would be very interesting to study the separate factors which act detrimentally on the vascular system in such cases, but they are so complex and so interwoven that it is almost impossible to consider them individually. Professor Levy remarks in a chapter on the Physiological Effects of High Altitudes[6]; "Though the effect of the Alpine climate, as a whole, on the human frame has been well studied, yet the effects of each separate factor are still very obscure." I will, however, pass some of these in review with respect at least to their bearing on the vascular system.

There can be no doubt but that the decrease of atmospheric pressure (a fall of 200 millimetres in the mercurial barometer for an ascent of 10,000 feet) is of importance. Mosso[7] could not detect any difference in the blood pressure, but it must be remembered that his observations were made on soldiers who were hardy mountaineers and were accustomed to live in high altitudes. It would be more appropriate to direct attention to the decrease of blood pressure observed by Professor Kronecker[8] in the persons whom he examined. It is most desirable that more information should be collected about the blood pressure of individuals who have returned to the low ground after a visit to high altitudes. The rarefaction of the air acts indirectly on the circulation by means of congestion of the vessels of the lung as already mentioned (Kronecker). The respiration becomes accelerated to the extent of 10 or 12 additional respirations per minute even in the complete absence of muscular activity; it becomes shallower for a time, only to increase afterwards and to surpass the original ratio. The volume of respiration (*Respirationsgrösse*) is increased even during complete rest by from 40 to 50 per cent. as compared with the corresponding volume for the same individual when on the low ground. This evidently implies extra work for the heart.

The chemical features of respiration also undergo changes. The amount of oxygen which is absorbed sinks while the respiratory quotient (*respiratorischer Coefficient*) rises. This means that the bodily tissues, inclusive of the heart, receive less than the usual amount of oxygen and it has also to be mentioned that the muscular substance of the heart is especially liable to suffer from a deficient blood-supply (Rosenbach). The quicker and more superficial the breathing is (and this is especially the case in elderly persons having an inelastic resistant thorax and suffering from emphysema) the more the want of oxygen makes itself felt. That is the reason why those who inhale only small amounts of air (only 300 or 400 cubic centimetres) at a time are predisposed to mountain sickness. The excess of carbonic acid in the blood must also act detrimentally on the nutrition of a feeble dilated heart. The direct influences on the circulation are manifold. The frequency of the heart beats increases by 20 or 40 per minute, an augmentation which may mean a great deal in the case of a weak heart. An increase in the number of heart beats from 60 per minute to 90 per minute for only five hours implies 27,000 contractions instead of 18,000, and the work performed by the heart in an identical space of time increases from 12,600 to 18,900 kilogrammemetres.

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[5] Mr. Guyer-Zeller's death was announced in the end of 1902.

[6] Handbuch der Physikalischen Therapie, von Goldscheider und Jacob, 1901, Band i., S. 129.

[7] Der Mensch in den Hochalpen.

[8] Loc. cit.

A most important factor, which, however, I cannot find mentioned anywhere, is the reduction of the temperature of the atmosphere, especially on exposed mountain peaks. During a mountain excursion of a couple of hours there may be variations of temperature to the extent of from 30° to 60° F. Peripheral blood-vessels are apt to contract and to remain contracted, especially if no muscular exercise is being taken, as in fact happens in these cases. Such vaso-motor changes must affect the blood pressure and the distribution of the blood in the whole system, even as far as the heart. It can be easily understood that on the return to the low ground considerable oscillations of the blood pressure and perhaps a considerable rise of some duration may take place—a sequence of events which may explain the sudden occurrence of apoplexy. It must be remembered that the vessels of the brain have not yet been proved to possess vaso-motor nerves, so that just at the most vital centres of life the regulation of the blood pressure may be very inconsiderable or even altogether wanting.[9] It is therefore not surprising that a feeble heart should show insufficiency under such an unusual strain.

It will here be convenient to make a few general references to acute dilatation of the heart. This condition, our knowledge of which is principally due to English authors, is observed in young persons after infectious diseases such as pneumonia, typhoid fever, influenza, &c. It also often occurs after severe muscular exercise, especially in Switzerland during military service. In Switzerland every citizen has to serve in the army and to do military duty for a period of from three to seven weeks every two years from the age of 20 until he is 32 years old and every four years from the age of 33 until he is 45 years old. On these occasions the men are often called together from sedentary occupations and when they arrive are in a condition quite unsuited for

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part every year, and I have seen hundreds of men lying about in different stages of acute exhaustion after having been called upon to make forced marches of 12 or 14 hours for several days. I question whether the interest of the State is served by thus recklessly (shall I add uselessly?) endangering the health of the troops in time of peace and I venture to suggest that my medical brethren in the army would do well to be more careful If one of them would take the trouble to study the state of the heart in a picked number of some hundreds of men before and after such manœuvres some scientifically interesting and practically useful results would no doubt be arrived at. I happen to have treated one such case eight years ago, occurring in a man, aged 22 years, a tailor, who had already done military service and who had not previously suffered from rheumatism or any other illness until in 1894 he had a slight attack of influenza. The toxins of this disease are well known to have a detrimental effect on the muscular tissue of the heart Two months afterwards he was called out for his periodical training, in the course of which, to quote his own words, "the troops had sometimes to make almost superhuman exertions, so that on one occasion the medical man attached to the regiment requested the commanding officer to stop the exercises and give the men a rest." After this training was over I discovered a very pronounced dilatation of his right ventricle with insufficiency of the tricuspid valve. I must lay especial stress on the fact that the subjective symptoms were inconsiderable and referred only to over-fatigue and palpitation. The heart beats were 86 per minute and epigastric pulsation was very distinct. Under rest and proper treatment this dilatation, together with the loud murmur over the tricuspid valve, disappeared within a fortnight; the murmurs were not heard afterwards. The pulse-rate became normal and even subnormal (60 per minute) In the following year, however (1895), he suffered from pleurisy on the right side with copious effusion which required tapping and I evacuated about four pints of clear fluid During this illness a slight dilatation of the right ventricle again occurred and while he was convalescing a systolic murmur was heard over the mitral valve probably due to anæmia; it disappeared, however, in a couple of weeks and did not return. My report on the case led to the man being discharged from further military service. I have seen him every year since then, but only on account of slight ailments. His heart has recovered completely and has remained free from murmurs. I have searched in the medical journals for records of such cases, but I have not found any except in the Vienna journal *Der Militararzt*. As may be easily understood, acute dilatation of the heart is often observed after violent and prolonged bicycle exercise, especially if the cyclists are not in training, if they have not observed moderation in the amount of fluid which they have drunk, if they have rushed up steep inclines, or if they have ridden for some time against a strong wind. As the individuals concerned are usually young persons whose cardiac muscle is in good condition the heart can, and does, respond by becoming hypertrophied, the result being that dangerous consequences are generally avoided.

It would seem at first sight impossible that dilatation of the heart should be produced in persons who have been carefully conveyed up to high altitudes without any muscular effort whatever on their part, and it would seem equally impossible that the manifestation of grave symptoms should be deferred until 24 or 36 hours after the excursion has been made. The facts, however, must be accepted as they are found in nature and I will gladly leave the explanation of them to those who are sufficiently versed in physiology and pathology. Some of the cases mentioned in the present article may be of service in this respect and records of similar ones will give additional assistance. As regards the long interval which may elapse between exposure to conditions detrimental to health and the appearance of pathological symptoms I can refer to the following facts. I have three times at the age of 38 years had occasion to overstrain my heart at bicycle exercise, my heart being apparently healthy both then and now. With the exception of an unusual sensation of fatigue which continued for a couple of hours I felt no disquieting symptoms until after the lapse of 12, 16, and 18 hours respectively. The same symptoms repeated themselves each time and I have no intention of renewing the experience. I woke between midnight and 4 A.M. with what I should call a fluttering of the heart or, if the expression is admissible, a distinct consciousness that I had a heart (an acute medical observer has said that we are unconscious of the existence of our internal organs so long as they are not out of order). I had no pain but my pulse was irregular, which is a most exceptional occurrence, and it remained so for about the space of an hour when I went to sleep again. I may also refer to the case of my patient mentioned in THE LANCET of June 17th, 1899, p 1628 He made a railway journey up the Pilatus (7000 feet) and his acute attack of angina only

In THE LANCET of Nov. 8th,

Morison has described the

who was up to the time of his illness supposed to be in good health and whose first attacks of angina pectoris occurred 12 hours or more after unusual exertion and fatigue which must have played a considerable part in the causation. The patient seldom blames the mountain journey for his sufferings and he certainly does not influence the medical man in that direction. The latter, however, finds that patients present severe subjective symptoms with corresponding objective changes after journeys by mountain railway and if he has either known the patients before or can obtain medical evidence as to their previous state of health he will have no doubt as to the sequence of cause and effect.

præcordial anguish of

these in different combinations and different degrees of intensity. Objectively, more or less dilatation of the right ventricle of the heart is discovered. That this may often be observed and should be carefully studied I gather from a letter in which a colleague in Zermatt wrote as follows in November, 1902: "I often observe dilatation of the right heart up here and consider this an indication for sending the patient immediately to the low ground." The fact that it is not uncommon for two or three different medical men to see a patient at various stages of the same illness assists in masking the connexion between cause and effect.

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[9] Ferrier (Harveian Oration on the Heart and Nervous System). THE LANCET, Oct. 25th, 1902, p. 1099.

Preventive measures have already been sufficiently discussed. As regards treatment, the sending the patient down from the high altitude as soon as possible is imperatively indicated. A carriage is generally a more advisable means of conveyance than the railway, as the patient can be kept quieter. Absolute rest in bed for several days is necessary. In the event of insomnia being present wet packs well covered with flannel may be applied to the lower extremities (*Wadenwickel*) or to the abdomen (*Leibwickel*); bromides may also be given or injections of one-third or one-fourth of a grain of morphine. The heart may be stimulated with caffeine or, better still, with camphor, but not with digitalis. The bowels must act daily, aperients or enemata being resorted to if necessary. Free diaphoresis should be encouraged. Externally counter-irritants may be applied in the region of the heart and in severe cases venesection may be performed. The heart must afterwards be kept comparatively quiet for several weeks and in severe cases even for months.

As an illustration of these points I will now describe a typical case that came under my observation some months ago. The patient was 68 years of age and was a business man in comfortable circumstances. His residence was near the lake of Constance and on Sept. 5th, 1902, he took a trip with his family to Villars, a pretty health resort above Bex in the Valais, situated at an altitude of 4166 feet. For many years he had led a most regular and sober life, had taken great care of his health, and up to that time was considered to be fairly well. Five years before he had been operated on for umbilical hernia; the surgical anæsthesia was of considerable duration and he afterwards suffered from some nervous troubles which lasted for four or five weeks. Four years before he had one attack of hæmaturia which recurred only once—namely, in June, 1902—when a thorough examination was made but without any definite clue being obtained as to the seat of the mischief. There was no albumin in his urine; his heart was found to be healthy and no murmurs were heard. It must be carefully kept in mind that at Villars he had two days for acclimatisation, that he felt well, and that he took some short walks. He had a horror of cold water and he did not indulge in either cold sponging or muscular exercise, his only exercise being an hour's carriage drive twice a day. He had recently been complaining of a tired feeling in his legs which was attributed to varicose veins of some years' standing. On Sept. 7th he made an excursion by train to Bex, Gornergrat, and Zermatt, thus exposing himself within the short space of ten hours to any influences connected with the following differences of altitude—namely, between Villars and Bex, 2755 feet; between Bex and Gornergrat, 8505 feet; and between Gornergrat and Zermatt, 4625 feet. He was quite well during the trip and for the next 36 hours; it must be remembered that at Zermatt he was still at the comparatively high altitude of 5315 feet. The first symptoms showed themselves on Sept. 9th while he was taking a short walk under a hot sun after having smoked a strong cigar at an unusual hour (he generally only smokes a cigar or two in the evening). These first symptoms were very severe and consisted of dyspnœa, a sick feeling, faintness, cyanosis, and profuse cold perspiration. With difficulty he managed to return to the hotel where he was put to bed. A medical man ordered mustard plasters to be applied to the region of his heart and administered bromides and caffeine. During the night he was very uncomfortable and restless, with a pulse-rate varying from 80 to 90, but his condition improved somewhat and he returned to Villars on the following morning (Sept. 10th). It was clearly wrong to allow the patient thus again to subject himself to two new differences of altitude—namely, one of 4569 feet between Zermatt and Bex and one of 2755 feet between Bex and Villars; his medical adviser ought rather to have sent him to the Rhone valley (Bex, Martigny) or to the lake of Geneva (1230 feet). In Villars there was a violent return of the symptoms already mentioned, together with dangerous collapse, great dyspnœa, failing pulse, and bradycardia. The medical man in Villars diagnosed very considerable dilatation of the right ventricle and gave caffeine and tincture of digitalis internally with the external application of counter-irritants such as sinapisms or hot fomentations. The patient recovered to some extent but still was unable to sleep. Having been summoned by telegram to Villars I saw him on Sept. 12th, the fifth day after his disastrous railway journey, and I then made the following notes of his clinical symptoms. As already indicated, he was an elderly man. He was very thin, with ill-nourished flabby muscles; he lay flat on his back suffering from considerable dyspnœa and every now and then he raised himself up in bed to gasp for breath, after which he lay down moaning. His respirations were 36 per minute, his pulse and heart beats were 46 per minute and synchronous, and the radial arteries were slightly thickened. The cardiac impulse was in the normal position just within the mammillary line, the border of the heart projected one inch to the right side of the sternum, and my colleague at Villars said that the dilatation of the heart had previously been still more considerable. The sounds of the heart were quite clear though soft; over the aorta the second sound was accentuated. I must here mention that up to Sept. 18th *no cardiac murmur* was heard. After a loud systolic sound and a softer diastolic one there followed a lengthened pause during which it was sometimes possible to hear a few vibrations, a flutter of the heart pointing to incomplete contractions. One-half of 92 contractions of the heart were so slight as to remain imperceptible to the ear. The veins of the lower extremities were slightly enlarged. The liver projected beyond the lower border of the ribs by a hand's breadth and could be felt as a hard mass. There were signs of emphysema of the lung, but no symptoms of bronchitis. The urine was clear and free from albumin. The patient complained of a feeling of unrest which was difficult to control, of great thirst, of want of breath, and of weariness from want of sleep. He also complained of a sensation of oppression in the region of the heart which I should call præcordial discomfort; it never became so severe that the term "præcordial anguish" or its equivalent angina pectoris would have been applicable. If it was thought desirable to use the word "angina," which would correspond to the English word "anguish," the case might be called one of "angina sine dolore." Notwithstanding the general severity of the symptoms the patient never had the impression that he was in imminent danger of death. The absence of angina pectoris did not necessarily imply that his coronary arteries were intact, for as Dr. Morison has correctly remarked in THE LANCET of Nov. 1st, 1902, p. 1176, "the grossest atheromatous and calcareous changes may be met with in those vessels without their having elicited during life any feature in the syndrome of angina pectoris." The patient was kept at perfect rest until he could be removed to the low ground in a carriage, he had easily digestible food and stimulants (Bordeaux) in small quantities, and he also took camphor internally. The subsequent history of the case was as follows. The journey to Montreux was accomplished in safety, but there was little improvement in the patient's condition notwithstanding the most absolute rest, clearing of the bowels by an enema, and stimulation of the heart by camphor. The dyspnœa did not decrease, the heart beats went steadily down from 50 to 46, 42, 38, 34, and 32 per minute; the cyanosis and dilatation of the right side of the heart became worse. After two powders containing two grains of camphor and one grain of powdered digitalis, which were administered for the purpose of testing the reserve force of the heart, it made 64 or 70 contractions per minute for a couple of hours, but the pulse remained at 32 or 35 per minute, bradycardia being thereby distinctly manifested. Hydrotherapy could not be resorted to except in the form of hot fomentations applied to the præcordial region, since on account of threatening thrombosis of the heart the patient had to be kept almost immoveable on his back. I caused him to perspire freely by administering small cups of hot tea made with juniper leaves, but this relieved him for only a couple of hours.

Professor de Miéville of Lausanne saw the patient with me on Sept. 13th. He confirmed my diagnosis in every respect and also considered the prognosis to be unfavourable in the extreme. He was of opinion that the liver was not merely congested (*Stauungsleber*) but that there probably were pre-existent changes of an inflammatory nature, as the liver felt too hard for mere engorgement; this view seems, however, to have been proved erroneous by the sequel. He recommended stimulation, camphor, wet and dry cupping, and the administration of morphia in doses of one-tenth of a grain for the purpose of controlling restlessness and promoting sleep. The patient's state went, however, from bad to worse. A double venesection (the median vein being opened in the forearm) somewhat relieved the heart owing to the removal from the engorged venous system of more than five ounces of dark blue blood which coagulated very rapidly and was under the very highest pressure. A hypodermic injection of one-eighth of a grain of morphia brought no relief and Cheyne-Stokes breathing, which is of no good augury in such cases, supervened. The vital centres in the medulla were becoming affected owing to [illegible] an insufficient amount of oxygen [illegible]th the patient, although perfectly conscious, was in the utmost degree of collapse. His features were yellowish and pinched, his nose and lips were cyanosed, his arms and legs were quite cold, and the pulse was imperceptible or no pulse could be felt. His respirations were of the Cheyne-Stokes type and eight per minute; his heart beats were 22 per minute. His general state reminded me of the comparable conditions which may be observed both in adults and in infants—in adults suffering from Landry's creeping paralysis in the last stage (a case of which I described some years ago in the *Correspondenzblatt fur Schweizer Aerzte*) and in infants suffering from the acute heart failure which sometimes follows diphtheria. In order to relieve him I gave a hypodermic injection of one-third of a grain of morphia. He fell asleep in half an hour; the cardiac collapse increased and cold perspiration made its appearance, but in an hour his pulse returned (25 beats per minute) and in three hours he woke up asking for something to eat. After this he slept with but few interruptions for 24 hours, waking spontaneously at intervals of three or four hours, taking food, and then falling asleep again. He was saved. The cyanosis had improved, the heart boundary had receded by almost half an inch, and the pulse-rate increased from 25 to 30, 40, 50, and then 60, the pulse and the heart beat acting together.

As a new complication hæmaturia set in, first five and then about eight ounces of pure blood being passed instead of urine. I thought that there might be an embolus in one kidney, but in this I was mistaken. Most probably the hæmorrhage came from dilated blood-vessels in the kidneys, bladder, and even the prostate gland, for the *engouement* of the venous system was enormous, as proved by the distension of the liver. The action of the heart rose to 78, it became intermittent (for the first time), every sixth beat failing, and a systolic murmur was heard over the mitral valve. This was attributed partly to anæmia, but was also partly due to the acute dilatation of the muscular tissue of the heart. I took leave of the patient on Sept. 18th when he was no longer in imminent danger.

Dr. Vuilleumier of Territet-Montreux kindly supplied me with a *résumé* of notes giving the further history of the case. The heart's action was maintained at the rate of 80 or 90 [illegible]al times and [illegible] few hyaline [illegible]fter repeated and very careful examination. On Sept. 23rd the patient was allowed to sit up in bed. As was to be expected considerable hypostasis was found in the lower lobes of both lungs, together with catarrh. There were no symptoms of pneumonic infiltration; the temperature never exceeded 99° F. On Oct. 6th the border of the heart only reached the middle of the sternum—the *status quo ante* being thus restored after a month—and the liver no longer overlapped the border of the ribs. The patient left for home on the 14th, having previously had a carriage-drive on two occasions. I saw him in Zürich on the 18th and made notes to the following effect. His face was unusually pale but there was no longer any cyanosis. His heart beat quite regularly at the rate of 96 per minute; a soft systolic murmur over the apex of the heart still persisted; the second sound over the aorta was accentuated. The heart did not reach the right border of the sternum; the liver had receded under the ribs. The urine amounted to two pints in 12 hours and was of normal colour. There [illegible] of the right lung and [illegible] I recommended the [illegible] retire from business life. He was recommended to practise deep breathing methodically two or three times a day whilst lying on his *left* side; the intention of this was to promote the entrance of air into the right lung. He was advised to have a uniform temperature maintained in the rooms in his country house, as he declined wintering in the south. I ordered him pastilles of "fersan," a new iron preparation which gives me excellent results in anæmia. I sent a detailed account of his illness to his family physician. The patient had indeed pr[illegible] verity of Haller's dictum, that the heart is the [illegible] *moriens*.

I think that it follows clearly from this detailed [illegible] and my deductions that the patient in question owed the acute dilatation of his heart to the railway trip. A healthy heart might resist such rapid differences of altitude, one with chronic degenerative changes could not. It must also be remembered that the congestive conditions in the venous system due to varicose veins and the emphysema of the lung predisposes the patient to such an affection. There is neither any proof nor any reason to suppose that any considerable distension of the heart existed before. The fact that the heart resumed its normal dimensions is a further fairly convincing proof, but some damage obviously resulted to the heart. A report dated Nov. 18th read as follows: The hypostasis was gone, the heart murmur had disappeared, but the heart beats still varied between 80 and 90 per minute. The patient has passed a good winter and is in his usual health. I met him at a dinner party in March, 1903. I cannot tell why the hypodermic injection of a large dose of morphine acted so promptly and satisfactorily. Of course, the rest procured by sleep must not be underrated. Then, perhaps, the muscle of the heart dilated partially at maximum lost some of its *active* contractility, and thus got space for more energetic contractions to overcome the existing obstacles in the circulation. The bradycardia was most probably of muscular origin. Of late it has become usual to refer the rhythmic action of the heart principally to the muscle[10] and to speak of automatic action. Zuelzer[11] remarks that the conception of the independent action of the muscle of the heart has gained ground in pathology since von Leyden's work on the subject and that the rhythmical contraction of the heart depends on the condition of the muscle, its [illegible] (*Erregungsfähigkeit*), and capacity [illegible] muscle became relaxed the bradycardia ceased; this sufficed to establish the connexion between the disturbance of the rhythm of the heart and muscular lesion. A great many questions of interest have been barely referred to in this paper, which must be reconsidered in the light of physiological experiments and clinical reports. If my incomplete deductions stimulate others to study this question of practical importance it will have accomplished all that I desire.

Zurich.

ON THE DISCOVERY OF A SPECIES OF TRYPANOSOMA IN THE CEREBRO-SPINAL FLUID OF CASES OF SLEEPING SICKNESS.[1]

By ALDO CASTELLANI, M.D.FLORENCE.

ON Nov. 12th, 1902, when examining a specimen of cerebro-spinal fluid taken by lumbar puncture during life from a well-marked case of sleeping sickness, I was surprised to observe a living trypanosoma. Since that date I have made as many observations in this direction as possible and the results are, to my mind, sufficiently surprising to excuse me for presenting this preliminary note. These trypanosomes do not occur in large numbers, so that to find them it is necessary to draw off at least 15 cubic centimetres of the cerebro-spinal fluid. It is better to reject the first few cubic centimetres as they are apt to contain blood. When the fluid comes away clear 10 cubic centimetres are collected and centrifuged for 15 minutes. At the end of this time there is found at the bottom of the tube a slight deposit of whitish sediment and in some cases also a minute trace of blood. The liquid above the sediment is poured off and the sediment is examined under a moderately low power of the microscope. As the trypanosomes are at first fairly active they are easily detected.[2]

In 34 cases of sleeping sickness the trypanosomes were found in the cerebro-spinal fluid taken by lumbar puncture during life in 20 cases. On two occasions I also examined in the same way fluid from the lateral ventricles and in both cases found the same parasite. In blood I found the trypanosoma once with certainty; only a few patients were tested. It may be thought that the trypanosomes are found in the cerebro-spinal fluid on account of the trace of blood which sometimes forms part of the sediment. But in several cases there was no trace of blood. In 12 cases of ordinary disease the cerebro-spinal fluid taken during life by lumbar puncture in no case contained trypanosoma and it is important to note that three of these controls were cases of the usual trypanosoma fever, as described by Forde, Dutton, Manson, Daniels, and others. Here it may be remarked that trypanosoma fever is by no means uncommon among the natives in Uganda, three cases having been met with by Dr. Baker, one of the colonial surgeons here (Entebbe), within a period of three weeks. I understand that Dr. Baker is publishing this most interesting observation. It must be clearly understood that these cases of trypanosoma fever bear no resemblance in their clinical features to sleeping sickness.

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[10] See von Leyden: Kurze Kritische Bemerkungen über Herznerven, Deutsche Medicinische Wochenschrift, 1893.

[11] Berliner Klinische Wochenschrift, 1900.

[1] Communicated by the Malaria Committee of the Royal Society, [illegible] 903," and read before the society [illegible]

[2] [illegible]ables which we have not printed [illegible] in the text gives all the needful points.—ED.

The trypanosoma found in the cerebro-spinal fluid of sleeping sickness does not, as far as I have been able to make out, differ materially in size and shape from the species one finds in the blood of trypanosoma fever, trypanosoma Gambiense (Dutton), but possibly it is to be differentiated from this one, because, as a rule, the micro-nucleus lies nearer the extremity and the vacuole is apparently larger. Besides, its movements are not apparently so active, but this fact might be due to the effects of the centrifugation. In case it should prove to be a new species, the trypanosoma which I have described might be called from the country where I have found it first—trypanosoma Ugandense.

Relation of the trypanosoma to sleeping sickness.—At the post-mortem examination of 80 per cent. of the cases where I found the trypanosoma during life, I grew from the blood of the heart and from the liquid of the lateral ventricles the variety of streptococcus which I described many months ago in my first note. Up to that time I had never found the trypanosoma, but this is easily explained by the fact that I did not use the technique which I have described in this note —viz, examination of a *large* quantity of liquid after a long centrifugation. Influenced by my last investigations I would suggest as a working hypothesis on which to base further investigation that sleeping sickness is due to the species of trypanosoma which I have found in the cerebro-spinal fluid of the patients in this disease and that at least in the last stages there is a concomitant streptococcus infection which plays a certain part in the course of the disease

Note by the Secretary of the Royal Society.—As so far supporting the observations by Dr. Castellani recorded in the above communication, it may be desirable to state that Colonel D. Bruce, R.A.M.C., to whom in Uganda Dr. Castellani made known his discovery of the trypanosoma and who is now continuing the investigation begun by Dr. Castellani, has sent to the Royal Society a telegram, received May 4th, stating that since Dr. Castellani left, in 38 cases of sleeping sickness he had found trypanosoma in every case in fluid obtained by lumbar puncture and that he had found trypanosoma in the blood in 12 out of 13 cases of sleeping sickness. —MICHAEL FOSTER.

CASE OF CHOREA GRAVIDARUM TREATED BY INDUCING ABORTION.

BY JOHN BENJAMIN HELLIER, M.D. LOND.,
HONORARY OBSTETRIC PHYSICIAN TO THE LEEDS INFIRMARY; LECTURER ON DISEASES OF WOMEN AND CHILDREN IN THE YORKSHIRE COLLEGE.

CHOREA gravidarum is by no means a common condition. Buist,[1] in his most careful statistical review published in 1895, had been able to collect 226 cases. In only 20 of these had delivery been induced. Hence an account of the following case, for the notes of which I am indebted to Mr. H. Tomlin and Mr. C. T. Matthews, may be of interest.

The patient, a married woman, aged 23 years, residing in the country, was admitted into the Leeds Infirmary on Dec. 1st, 1902, being about four months pregnant and suffering severely from chorea. She had lived in adequate circumstances and had always had good food and up to three years before she had enjoyed good health. Her family history was good, there being no record of rheumatism or chorea. Three years before the patient had had an attack of rheumatism which kept her in bed for three or four days, her hands and feet being swollen and painful. From this she recovered and had no recurrence. She was married in February, 1901. During her first pregnancy she had much vomiting but no other symptoms. Her first confinement took place on Dec. 5th, 1901, when a living male child was delivered by forceps and has since thriven well. Since that time she had been short of breath and had not been able to work so hard as previously. She did not suckle the child, having no milk. She ceased to menstruate at the end of August, 1902. In the early weeks of pregnancy there was no vomiting but she felt unduly tired. She dated her present attack from about the end of October. She felt increasing weakness and her husband noticed her altered facial expression. Choreic movements were marked about the middle of November and she also complained of difficulty in sleeping. She sought medical advice on Nov. 27th and was sent to the infirmary on Dec. 1st, being admitted into the medical wards under the care of Dr. A. G. Barrs. On account of her restlessness and noisiness she was placed in a private ward.

On admission she was found to be a young woman of medium stature, not badly nourished and showing the usual signs of pregnancy at four months. She manifested violent choreic movements of the arms, the head, and the face, and to a less extent of the legs and trunk. She was intelligent and cheerful and though she spoke with a hurried and whispered voice she could articulate fairly well. There was some swelling of the left wrist but she had no pain. The pulse was 120, small, and difficult to feel because of the choreic movements The respirations were about 30 and the temperature was not above 99° F. The lips were red and not dry, the tongue was moist, and the fauces were congested and sore Physical examination of the chest showed no abnormality in the lungs, but there was a slight presystolic thrill at the apex of the heart with a double bruit. There was also a systolic bruit over the pulmonary artery with accentuation and occasional reduplication of the second sound. The patient was treated medically for ten days with chloral and bromide, with paraldehyde and with trional, and then with chloral and bromide again, receiving in 24 hours as much as 90 grains each of bromide of potassium and chloral.

For the first seven days after admission there was no very marked change in her state; sometimes the movements were violent, sometimes she was quieter. She slept on the aggregate for four or five hours in the 24 and took food fairly well. On Dec. 5th Dr. Barrs asked me to see the case and we agreed that unless improvement was manifested shortly the pregnancy ought to be terminated On the 9th and 10th it was evident that the patient was worse. The pulse increased to 140 and the respirations to 32; the temperature rose to 101·2°. The patient became more restless, talked incessantly, and was slightly delirious at night. The speech had become thick and the articulation less distinct. The tongue was coated and dry and the lips were sore. It was very difficult to feed the patient, although occasionally she took food well. She slept very little. She was now transferred to the gynæcological ward and Dr H Brown, the resident obstetric officer, took charge of the case.

On Dec. 11th, at 4 P.M., the patient was anæsthetised with chloroform and placed in the lithotomy position. The genitals were shaved and carefully disinfected. The cervix was drawn down with volsellum forceps and a sterilised bougie was passed entirely into the uterus without rupturing the membranes. The vagina was then packed with iodoform gauze. The patient had a comparatively quiet night. The fœtus and placenta were expelled about 7 A.M. on the 12th, or 15 hours after the bougie had been inserted. There was no post-partum hæmorrhage. The labour pains did not cause any marked increase of the choreic movements. The fœtus, a male with well-differentiated genitals, measured 17·5 centimetres. It was of about 21 weeks' development.

For the next three days there was no improvement. The movements became violent two hours after labour and continued so. The tongue was dry and ccated and there were sordes round the lips. The temperature varied from 100·5° to 102° and the pulse was very rapid, reaching 150 or even 160. There were no signs of uterine or pelvic mischief. She was unable to answer questions. On the 14th she had a very quiet night, the movements being very slight. On the 15th the patient was very restless and was ordered 30 grains of chloralamide every four hours. She slept for eight hours on the night of the 16th. She had a morbilliform rash over the face, the arms, and the chest. The choreic movements were marked but were certainly better. On the 19th the patient was very much better, the temperature being normal and the pulse 102. The rash was gone and the uterine condition was normal. On the 22nd she had greatly improved and was removed from a private ward to the ordinary ward. She was almost free from choreic movements, her mind was clear, and her speech was much better. The bruit was almost gone from the pulmonary artery. There was still a double bruit at the apex, but this was less marked; there was also a slight presystolic thrill. On the 23rd she was ordered five minims of arsenical solution three times daily. On the 28th she was able to feed herself and was taking 40 grains of chloralamide in the 24 hours. She was able on the 29th to thread a needle and to write her name fairly well. On the 30th the chloralamide was omitted and on Jan. 20th, 1903, she was discharged cured and with no choreic movements. Since her discharge she has attended at the infirmary occasionally as an out-patient. She continues well but there are some hypertrophy of the heart and some mitral incompetence.

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[1] Transactions of the Edinburgh Obstetrical Society, 1894-95.

When the patient was transferred to my care she was certainly in a very critical condition and in the opinion of both Dr. Barrs and myself the indications were strong for terminating the pregnancy. The chorea of pregnancy depends upon a condition of toxæmia. The pregnant state fosters the toxæmic condition and renders it very little amenable to treatment by drugs. To terminate the pregnancy seems a rational method of treatment. Its effect cannot be expected to be instantaneous but may develop in two or three days. The logical demonstration of the effect of inducing delivery is impaired by the fact that chloralamide was given, and given with obvious benefit, on Dec. 15th and onwards. In my opinion the improvement began before this and the patient, who had previously derived no apparent good from drug treatment, now benefited at once. At the same time I admit that chloralamide had not been tried before delivery. Still chloral and bromide had been pushed to the full and the patient was getting worse. There is practically no doubt that inducing abortion saved her life.

Chorea gravidarum is not an essentially incurable disease. Mild cases occur from time to time which clear up without serious trouble and even marked cases may recover and go to full term, but it is a very serious complication of pregnancy and if the mortality is not so high as was formerly estimated—as by Dr. Barnes who found 20 deaths in 68 cases (29·4 per cent.)—it is still very high. Buist estimates it at 17·5 per cent., Kroner at 22 per cent., and Spiegelberg[2] at 26·9 per cent. The presence of endocarditis, as in this case, is a serious factor in prognosis. No one suggests that artificial delivery is the routine treatment for all cases, but it is the treatment to be applied when chorea gravidarum threatens life. When the movements are slight, when the patient can eat and sleep well and maintains her weight, when the pulse is under 100 and there is no pyrexia, or when confinement to bed suffices to keep the patient fairly quiet and comfortable, then there are *no indications for radical measures*. When, on the other hand, the movements are violent and continue so in *spite of rest in bed and drug treatment*, when the patient cannot sleep or take food enough and is losing weight, when the mental condition is confused and there is a tendency to delirium, when there are a rise of temperature and a dry tongue, and especially when the pulse is persistently above 100 and is becoming weaker and more rapid, then the indications are complete and absolute. One thing more, however, must be said. If we wait for indications as complete and absolute as these we may find that we have waited too long. The attempt to save the fœtus may lose the patient. In chorea gravidarum, as in hyperemesis gravidarum, the cases which require interference require it in good time. In my next case I shall not wait so long as I did in the one under consideration.

As a matter of technique I greatly prefer in such a case induction of abortion by stimulating the physiological action of the uterus to a forced mechanical delivery at one sitting. Some mechanical dilatation may be useful to complete delivery, but a preliminary setting up of uterine action by the bougie is of great advantage. The fact that we have now powerful rapid mechanical dilators available does not alter this opinion.

Leeds.

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[2] See article by Hirsche in the Monatsschrift für Geburtshülfe und Gynäkologie, January, 1903. (An abstract of this article appears in the Journal of Obstetrics and Gynæcology, April, 1903.)

A SIMPLE EXPEDIENT IN THE ESTIMATION OF SUGAR BY THE COPPER REDUCTION METHOD.

BY S. ARCHIBALD VASEY, F.I.C., F.C.S.

FROM time to time the original method devised by Fehling for the estimation of sugar has been modified in some way or other, chiefly with the view of making the end of the reduction process more accurately and easily observable. It is probable that accuracy is more likely to ensue when the reagents are kept as near simplicity as possible. The modifications of Fehling's original processes have consisted in the addition of reagents in which the reduced copper is soluble, so that the blue colour is discharged by the addition of the sugar solution, a clear colourless solution being finally obtained. Thus Pavy suggested adding strong ammonia and Gerrard cyanide of potassium to the Fehling mixture. Both modifications present advantages when operating upon certain fluids with sugary contents. Pavy's method works well and gives accurate results for all ordinary purposes in the case of estimating milk sugar directly in milk or glucose in urine, but the results are variable according to the ammoniacal strength of the copper solution, and it is hardly possible to keep this constant, since the solution must be used boiling. Then the ammonia fumes are troublesome. Gerrard's cyanide process has no objections of this kind but it is somewhat complicated and involves the employment of a solution of potassium cyanide which is not stable. The process, however, is accurate.

As is well known, the drawback to the original method of Fehling is the formation and suspension of red cuprous oxide in a blue solution. The oxide is so fine that it is slow [illegible] difficult to mark [illegible]s disappeared or, [illegible]pper is in the insoluble condition of cuprous oxide. It occurred to me that instead of adding a reagent to form a soluble compound with the cuprous oxide as it is produced, as in Pavy's and Gerrard's processes, an inert powder, preferably of a clear white colour, might be employed so as to entangle the precipitated oxide and carry it rapidly to the bottom of the solution and thus to leave a clear liquid above in which the faintest trace of blue could be seen. I subsequently found that precipitated chalk and later barium sulphate fulfilled this idea admirably. Lead or [illegible] inadmissable. I now proceed [illegible] quantity of Fehling's solutio[illegible] metres) suitably diluted I ad[illegible] finely precipitated calcium carbonate or barium sulphate. The mixture is then raised to the boiling point, being gently stirred with a glass rod during the whole time. The solution in which the amount of sugar is required to be known is then run in after the usual manner. It will be found that the red cuprous oxide will be deposited upon, and evenly distributed through, the chalk slime or the barium sulphate which rapidly subsides, so that the true colour of the clarified supernatant liquid is quite easily seen. In this way the exact point of transition from a trace of blue colour to a colourless solution can be sharply noted. The process is rapid and extremely accurate according to a number of estimations made by me with standard solutions of sugar, diabetic urines, wines, and other sugary fluids, and it certainly has the merit of simplicity. This modification I feel sure will be found to be very convenient in clinical practice.

Bromley, Kent.

PRELIMINARY NOTE ON THE USE OF CHLOROFORM IN THE PREPARATION OF VACCINE.[1]

BY ALAN B. GREEN, M.A., M.D. CANTAB.

(From the Government Lymph Laboratories.)

IT is well known that glycerine exerts an action on vaccine whereby the extraneous bacteria are eliminated in the course of a few weeks, while the specific germ undergoes no undue deterioration from the process. I have found that by the use of a solution of chloroform in distilled water the extraneous bacteria of vaccine are eliminated in from one to six hours, the specific germ remaining fully potent for vaccination. The solution of chloroform that can most advantageously be employed in the preparation of vaccine is a saturated solution in distilled water, having a strength of 1 in 200. This is the limit of such solubility.

The following method of using such solution has so far given the best results. Vaccine emulsion is first prepared by triturating vaccine pulp with distilled water. *The presence of the water is essential* in order that later chloroform may enter into solution with it. About three parts by weight of water should be mixed with one part by weight of pulp. Should a more viscid emulsion of vaccine be desired glycerine may be added without interfering with the action of the chloroform. I have found that the usual admixture of one part by weight of vaccine pulp and four parts by weight of a solution consisting of equal parts by weight of glycerine and water forms a perfectly suitable emulsion for this process. But glycerine is incapable of dissolving chloroform and the elimination of extraneous bacteria by this chloroform process is solely due to the action of chloroform water. Indeed, when the addition of glycerine to the vaccine emulsion is desired, it can be very advantageously effected after the completion of the process. The newly made vaccine emulsion to be subjected to the action of chloroform is dealt with in the following way. Sterile air is first passed through pure liquid chloroform, whereby this air becomes charged with chloroform vapour. This mixture of air and chloroform vapour is then passed through the vaccine emulsion, which is contained in a cylindrical glass vessel of test tube shape and in size suitable to the quantity of vaccine to be treated. The mixed chloroform vapour and air can be passed seriatim through a number of tubes of vaccine before it finally escapes into the outside air, and it is efficient for all of them, provided that the current be sufficiently strong to keep the contents of each tube in active movement, and that a distinct smell of chloroform be apparent at the outlet of the last tube of the series. It is essential that no liquid chloroform be allowed to pass over into the vaccine, as its presence is strongly inimical to the potency of the lymph. To obviate the chance of such an accident an overflow bottle, weighted with sterile sand, is interposed between the bottle of liquid chloroform and the tube or tubes of vaccine emulsion. By passage through it of chloroform vapour and air the water of the vaccine emulsion quickly becomes saturated with chloroform and this strength of solution is maintained so long as such passage is continued. When saturation is reached all excess of chloroform immediately escapes automatically from the vaccine. Thus the vaccine is not at any time brought into contact with a stronger solution of chloroform than 1 in 200 in water.

A rapid and marked germicidal action is exerted on the non-spore-bearing extraneous bacteria of vaccine thus treated. The extraneous bacteria most commonly found in vaccines at the Government laboratories are staphylococcus pyogenes aureus, staphylococcus pyogenes albus, staphylococcus cereus flavus, and staphylococcus cereus albus. Others which occur either in smaller numbers or less commonly are staphylococcus pyogenes citreus, proteus vulgaris, streptococcus pyogenes, sarcina lutea, and some yeasts. Emulsions which have contained as many as 100,000 extraneous micro-organisms per platinum loopful at the time of mixture have, by the action of chloroform water, become free from their presence in from one hour to six hours. This freedom is evidenced by absence of bacterial growth in aerobic and anaerobic plate cultures. The germicidal action is first exerted on the least resistant members of each species of organism present in the vaccine. Generally after the first hour or one and a half hours of the process a very few of the more resistant staphylococci—aureus and albus—remain alive; these give rise to small inhibited colonies in plate cultures and these organisms succumb in their turn after further application of the process.

By contrast, elimination in like degree of the extraneous micro-organisms of vaccine by the glycerine process rarely occurs before the fourth week after mixture and is frequently not complete until a much later period, as shown by similar plate cultures. After elimination of extraneous bacteria from chloroformed vaccines the chloroform is evaporated until no trace remains. Such evaporation is most quickly effected by passing a stream of sterile air through the emulsion.

By the above method vaccine can be brought under the influence of the germicide for such time only as suffices to kill the extraneous micro-organisms. At present, however, there is no evidence to show that more prolonged contact with 1 in 200 watery chloroform solution has any harmful effect on its potency. As in the case of glycerine, non-spore-bearing bacteria in vaccine lymph are alone killed by this process. But in some thousands of vaccines examined at the Government Lymph Laboratories the only spore-bearing organisms found in vaccine were the strictly non-pathogenic organisms of the mesenteric group—bacillus mesentericus vulgatus, bacillus mesentericus fuscus, bacillus mesentericus ruber, and bacillus subtilis—and equally non-pathogenic moulds such as penicillium glaucum.

The practical working value of the foregoing method has been clearly shown by results of vaccinations performed with vaccines which have been thus subjected to the action of chloroform. These vaccines, having been rendered free from extraneous micro-organisms, were first tested on calves and were found to give excellent results. Within a fortnight after collection from the calf and of subjection to the action of chloroform water, such vaccines have been used (after evaporation from them of all chloroform) for primary vaccinations and revaccinations with results of high "case" and "insertion" success. It would seem, therefore, that the following considerable advantages are to be gained by the use of the chloroform process:—

1. So speedy an elimination of extraneous micro-organisms is attained that vaccine, practically free from such organisms, can be distributed for use within a few hours of its collection from the calf. In times of urgent demand for large quantities of vaccine, such as occur during small-pox epidemics, this process must needs prove of great value, since the necessity for wasting some weeks for elimination of extraneous organisms by glycerine will be done away with.

2 In so far as the vaccination value of vaccine depends on the activity of a living organism deterioration of that value must occur in the course of a longer or shorter time. The potency of some vaccines, glycerinated or otherwise, becomes greatly impaired within a few weeks of collection—that is, within the time required for glycerine to exert fully its influence in eliminating extraneous organisms. Some of these vaccines may, at the time of their collection, have possessed a high vaccination value. Vaccine, characterised by this high but somewhat transient potency, can by means of the chloroform process be used at once before its activity has deteriorated, thus allowing greater economy of vaccine material than would otherwise be possible.

3. For a similar reason the chloroform process might be of considerable use in hot climates where the preservation of the potency of vaccine is frequently a matter of considerable difficulty.

Experiments are at present being made to test the duration of the potency of chloroformed vaccines. A further account of this process will be given in the report for 1902–03 of the medical officer of the Local Government Board.

In conclusion, I wish to express my indebtedness and thanks to Dr. F. R. Blaxall for the generous help and advice which he has given me. My thanks are likewise due to Mr. H. S. Fremlin, with whom I am also associated in the work of these laboratories, and to Mr. S. D. Rowland of the Jenner Institute of Preventive Medicine for help afforded me.

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[1] A paper read before the Royal Society on April 30th, 1903.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

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A NOTE ON SOME STATISTICS OF CANCER IN INDIA.

BY O. N. SALDANHA, G.M.C.M., F.A., F.Sc.,
IND. UNIVERSITY.

As regards the difference of opinion as to the relative racial prevalence of cancer, the following figures taken from the annual report of one of the Indian life assurance offices may be of some interest, though they are not sufficiently large to warrant deducing a final conclusion therefrom. Out of a total of 401 deaths among the assured 313 occurred among Hindoos, two of which were due to cancer, and out of 42 deaths among Europeans or Eurasians three were due to cancer. There were 36 deaths among Parsees, one being from cancer. Among Mahomedans there were only ten deaths and none from cancer. The cancer-rate to total mortality among the first three communities was respectively 0·6, 7·0, and 2·8 per cent.—i.e., a ratio of 12 Europeans and four and a half Parsees to one Hindoo.

As regards the comparative rarity of cancer of the stomach among the Hindoos, as was reported or assumed to be the case by several correspondents during the discussion on the subject in the columns of THE LANCET some time ago, I will mention some dietetic peculiarities of that community. I am, however, suggesting no relation of cause and effect All underdone meat and sausages, ham, cheese, and canned foods, are not popular among the Hindoos, nor among the Mussulmans for that matter. Cold meats and cold rice is not *comme il faut* among Hindoos. All meals are entirely fresh cooked; there is no stock-pot. It is only the cakes and sweetmeats that are held over for a few days. Jams, pickles, and chutnies are home-made—i e, each family makes their own supply or are presented therewith by relatives and friends.

The accompanying table shows, for each of the various races, the amount of the claims by death from cancer paid during 1901.

Disease	Hindoos (402 policies)		Europeans and Eurasians (54 policies)		Parsees (52 policies.)		Mahomedans (17 policies)		Total (525 policies)	
	Lives.	Amount.	Lives	Amount	Lives.	Amount	Lives.	Amount	Lives.	Amount.
		Rs. a.p		Rs. a p.		Rs. a.p		Rs. a p		Rs. a p
Cancer...	2	3047 0 0	3	6259 9 8	1	5374 0 0	—	—	6	14,680 9 8

Hammersmith.

A CASE OF LEUKÆMIA WITH CHANGE OF TYPE IN THE APPEARANCES OF THE BLOOD.

BY ROBERT WILKINSON, M.D. BRUX., M.R.C.S. ENG., L.R.C.P. LOND.

THE case is that of a married woman, aged 35 years, whose previous health had been excellent. The symptoms of the present illness came on insidiously about December, 1901, in New Zealand and chiefly consisted of gradually increasing weakness and loss of weight. A few months later enlargement of the spleen was discovered by her medical attendant, but up to the time of coming to England she had little medical attention and no regular course of treatment. In April, 1903, she started for England and during the voyage became much worse, having to be landed at Marseilles and brought overland to Calais. She arrived in England in a dangerously depressed condition and was first seen by me on May 4th, when her condition was as follows. She was cachectic-looking, with rapid, feeble pulse (120 per minute). The temperature was 102 4° F. She was very drowsy. Her appetite was fairly good. Great enlargement of the spleen was present which extended across the middle line, the lower border reaching below the level of the left iliac crest. The liver was enlarged and palpable three inches below the costal margin. There was no ascites. The heart and lungs were normal. No sensory or motor abnormality was present; the knee-jerks and other reflexes were normal. There were no enlargement of the lymphatic glands and no tenderness of the sternum or other bones. Pronounced menorrhagia was present as well as one or two small ecchymoses of the skin. The pupils were normal and sight was unimpaired. There were copious retinal hæmorrhages and swelling of the optic discs. The urine had a specific gravity of 1015; there was no albumin or sugar but there was an excess of urates.

An examination of the blood was made on May 15th by the Clinical Research Association and the following is the *verbatim* report:—"Number of red blood cells equalled
number of white blood cells
is to say, while
one-fifth of the
...
normal, the white cells are increased to almost 100 times the average number. The films show a condition of blood absolutely pathognomonic of very advanced myelocythæmia. There was much polymorphism of white cells and one kind shaded so insensibly into the other that any accurate differential count was impossible. In addition to a marked absolute increase of all kinds of white cells, the most characteristic feature was the presence of enormous numbers of myelocytes which were frequently of great size. And as a peculiar feature of this blood, lymphocytes were quite as numerous as myelocytes and there was every gradation between the two. Polynuclear cells were relatively less abundant but the relative proportion of eosinophiles and mast cells was above the average. Another feature was the presence of nucleated red cells
were both normoblasts and
predominated. The case is of
pronounced myelocythæmia we have yet encountered."

In spite of most careful nursing and gradually increasing doses of liquor arsenicalis, &c., the patient became rapidly worse and on May 17th Dr. J. Purves Stewart was called in consultation and gave a very bad prognosis. On the 23rd, eight days after the first blood examination, the blood was again examined by Dr. Purves Stewart who had the advantage of Dr. W. S. Lazarus-Barlow's opinion. Dr. Lazarus-Barlow found that there was now a typical and extreme lymphocythæmia, though here and there a myelocyte was visible. On subsequent comparison of the two films it was clear that the type of the abnormal leucocytes present in the blood had undergone a complete change which was obviously in actual progress at the time when the first blood examination was made. The patient quickly sank and died early on the morning of the 24th. Left hemiplegia came on gradually three days before death and the temperature, which had been of the irregularly remittent type, rose to 104 4° at the end. No necropsy was obtained.

The above case is worthy of being reported on account of the unusual change occurring in the blood of a case of what was apparently a pure spleno-medullary leukæmia. The complete absence of lymphatic hypertrophy was itself as conspicuous as the positive enormous enlargement of the spleen that obtained. It seems probable that this is one of those very rare cases, similar to those recorded by Seelig[1] and van der Wey,[2] in which a pre-existing myelocythæmia towards the end of life changed its type to that of lymphocythæmia.

Upper Norwood, S.E.

NOTE ON AN OUTBREAK OF MALARIA ON BOARD SHIP.

BY J. BELL, L.R.C.P. LOND., M.R.C.S. ENG.,
SUPERINTENDENT OF THE GOVERNMENT CIVIL HOSPITAL, HONG KONG.

THE following account of a serious outbreak of malaria at sea may be of interest

Two Russian torpedo-boat destroyers left home for the Far East in October last. They touched at Colombo, leaving there on April 10th for Sumatra At this port they were anchored close to the shore and the crews were allowed leave. The destroyers left on the 19th for Singapore, at which port none of the members of the crews were on shore and the boats were anchored a long way off land. On the 23rd they left for Hong-Kong, the health of the crews so far being good. On May 1st and 2nd several of the men were suddenly taken ill with high fever, headache, furred tongue, and in a few cases vomiting. Out of the total crews of 58 men 21 were affected. On the 5th these men were brought to the Civil Hospital, Hong-Kong, and were at once isolated, as the medical officer reported them as cases of "malignant influenza." Their symptoms were much the same as when first attacked, the temperature varying between 100° F. in some cases and 104° in others. The routine blood examination at once settled the diagnosis. They were all teeming with malarial parasites, in the majority of cases (18) of the malignant type and in a few of the simple tertian variety.

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[1] Deutsches Archiv für Klinische Medicin, 1896, Heft 6.
[2] Archiv für Klinische Medicin, Band [illegible], S. 251.

The disease was no doubt acquired at Sumatra, which would give an incubation period of over 13 days, and was in all probability acquired on shore, as the captain informs me that he noticed no mosquitoes on board either boat. Under quinine all the patients recovered.

Hong-Kong.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Prooemium.

FRENCH HOSPITAL.

A CASE OF PURPURA FULMINANS.

(Under the care of Dr. GEORGE OGILVIE.)

THE patient, a French boy, aged 16 years, was admitted into the French Hospital on July 29th, 1902, with the following history. On July 26th he went for a bathe in the Serpentine at 7.30 P.M., remained in the water for a quarter of an hour, and came out feeling cold. Small purpuric spots appeared two days after on the left side of the neck and legs, and also on the tongue, and he also coughed up a small quantity of blood. These spots gradually increased in number and size, and he was sent to the hospital on the 29th. The family history showed no signs of rheumatism or syphilis, but the boy's uncle on his mother's side used to suffer from profuse epistaxis which was very difficult to control. The boy's personal history showed that he had always suffered more or less from epistaxis, and there was also a history of his being unable to stop the bleeding from a cut finger for three days.

On admission the boy was absolutely covered from head to foot with purple spots; they were more marked on the left side, varying in size from that of a pin's head to that of a shilling piece, and were most abundant on the face and neck and legs and ankles. Some spots were also visible on the inside of the cheeks and lips, and the tongue was covered with a large purple "plaque," causing it somewhat to resemble a case of "black tongue." There was a subconjunctival hæmorrhage in the left eye which covered the whole of the outer side of the eye. The temperature was 98·2° F. At 1.30 A.M. Mr. J. M. Barlet was called to the patient as he had vomited a large quantity of blood of the "coffee-ground" variety, which was followed by bright red blood, about one and a half pints in all. Previously to this he had passed a large stool, perfectly black, consisting of fæces and a large amount of blood. He was ordered ten grains of calcium chloride every four hours, but later he had another attack of vomiting, about one pint of nearly pure blood being brought up. This was followed by profuse epistaxis from the left side which was checked with ice. On visiting him next morning Mr. Barlet found him very blanched, collapsed, with a feeble rapid pulse and sighing respirations. The temperature was 99°. The hæmorrhage had almost entirely ceased. The patient was ordered ten minims of oil of turpentine, 30 grains of carbonate of bismuth, and almond mixture to half an ounce every four hours. He was given ice to suck; iced milk and soda-water and beef-tea were also ordered.

On July 31st the boy was a good deal better in the morning, there was no more hæmorrhage, the pulse was improving, and colour was returning. The temperature was 98·6°. The larger purpuric spots were passing through the ordinary stages of a bruise. The spleen and liver were not enlarged and there was no pericarditis or pleuritic effusion. The tongue had completely cleared. In the evening the left cheek was noticed to be swelling and there was some slight oozing of blood from the left upper gum. He remained well until the evening of August 2nd, when at about 5.30 epistaxis began from the left nostril, which could not be controlled by any means at hand—ice, hazeline, calcium chloride, and plugging of the anterior and posterior nares being all unsuccessfully tried—but the hæmorrhage finally ceased about 10 o'clock, the boy having lost about three-quarters of a pint of blood by the nose and having also vomited about one and a half pints of fluid mixed with "coffee-ground" material. He was very weak and blanched. The pulse was 120 and the temperature was 98°. He slept well, but epistaxis recommenced at 9 30 A.M. and was not checked until 3.30 P.M. by plugging the posterior and anterior nares with gauze soaked in adrenalin, of which he was also given 20 minims by the mouth. The boy was of a livid greyish colour and looking very bad. The pulse ranged from 130 to 148 and the temperature was 98·2°. The blood was examined microscopically on this day with the following result. By examining 15 squares, the number of red corpuscles was 54¼ per cent. Very slight increase in the number of leucocytes was present. There was no poikilocytosis. On examining the eyes with the ophthalmoscope some hæmorrhages were discovered round the left disc, some of them with whitish spots in the centre, but none at all in the right eye. From August 5th to 10th the patient had constant oozing from the left nostril of blood which latterly had become simply a watery fluid resembling serum. On the 11th he said that he felt well and very hungry, and from this date onward he rapidly recovered and was sent to the French convalescent home at Brighton on Sept. 2nd, returning thence three weeks later looking and feeling completely well.

Remarks by Mr. BARLET.—The interest of this case lies in the seemingly very trifling immediate exciting cause of the severe disturbance to which the boy was subjected, the rapid onset of the attack, and the fact that the hæmorrhages were always more marked on the left side than on the right. As to the original cause of the attack, it is somewhat difficult to be certain what this was, as there was no history of rheumatism or scarlet fever, which are sometimes predisposing causes, and also there were no swelling of any joint and no elevation of temperature as usually occurs in a rheumatic case. On the other hand, there was a distinct history of hæmophilia, both in the patient himself and in the case of his maternal uncle, so that I think the primary cause of the malady must be put down to the inherent hæmophilic tendency of the boy, and the immediate exciting cause to the shock of the cold water.

This case resembles that mentioned by Surgeon-Captain J. Fayrer in the *British Journal of Dermatology* for March, 1896, the onset being just as sudden but the results in this case being not so severe.

MANCHESTER UNION HOSPITAL.

A CASE OF CHYLOUS ASCITES.

(Under the care of Mr. ARTHUR H. BURGESS.)

THE patient, a man, aged 59 years, was admitted into the Manchester Union Hospital on March 24th, 1903. He had always enjoyed good health until ten weeks before admission, when he suffered from pain in the epigastric and left hypochondriac regions, constant and dragging in character, and uninfluenced by the taking of food. He at first vomited only occasionally but latterly very frequently. He had lost considerably in weight and during the three preceding days the abdomen had become rapidly distended. On admission the facial aspect at once suggested the existence of some malignant disease. The patient was extremely emaciated and there was general bronzing of the skin. The appetite was lost, the tongue was thickly furred, and he vomited after everything that he took. The abdomen was tensely distended with fluid and was dull everywhere to percussion except in the epigastric region where some tenderness on deep pressure was noted.

On March 26th the abdomen was tapped and seven and a half pints of a milky fluid were withdrawn, after which a careful palpation failed to reveal any definite tumour. The fluid had a specific gravity of 1015 was alkaline, odourless, and contained albumin but not sugar, did not coagulate spontaneously, and a microscopic examination showed numerous finely divided particles of fat, some finer granules probably of a proteid nature, and a few granular epithelial cells and degenerating leucocytes. On March 31st nine pints, and on April 13th 11 pints, of fluid with similar characters were withdrawn. Emaciation steadily increased and death from exhaustion occurred on April 24th.

Necropsy.—On post-mortem examination a scirrhous carcinoma, which had commenced in the head of the pancreas, was found and had involved the right suprarenal capsule, the commencement of the thoracic duct, and the wall of the inferior vena cava itself for a small extent. The pylorus had evidently been compressed, the stomach was dilated, and the gall-bladder was distended with bile. The chyle vessels were evident but no actual rupture could be demonstrated. Small areas of fat necrosis were present about the pancreas and on the under surface of the diaphragm and the liver was studded with small secondary growths.

Remarks by Mr. BURGESS.—A distinction is to be drawn between true chylous ascites and "chyliform ascites," a less rare condition in which the milky appearance of the fluid is due to fat particles derived from the degeneration of the cells of a malignant growth or an inflammatory effusion and not from the chyle vessels or the thoracic duct Microscopically the fat in chyliform ascites is in the form of large globules either free or contained within the degenerating cells, whereas in true chylous ascites only free finely divided particles of fat are met with. Obstruction to the thoracic duct only occasionally results in chylous ascites owing to the freedom of the collateral circulation, and malignant disease invading the duct and the receptaculum chyli has been observed without chylous ascites coexisting. Should collateral circulation fail to become established the pressure in the tributaries of the thoracic duct is increased and a transudation of chyle takes place into the peritoneum; or even a gross lesion, such as rupture or perforation of a chyle vessel, may allow of a direct escape of its contents.

GOCULDASS TEJPAL HOSPITAL, BOMBAY.

A CASE OF STRANGULATED INGUINAL HERNIA; PERFORATION OF THE BOWEL; RESECTION OF SEVEN INCHES OF GANGRENOUS GUT; RECOVERY.

(Under the care of Lieutenant-Colonel W. H. BURKE, I.M.S.)

A FAIRLY robust Mahomedan, aged 30 years, was admitted to the Goculdass Tejpal Hospital on the afternoon of March 30th, 1903. The patient stated that three days before admission while walking with a heavy load on his head he felt a sensation of something having given way and simultaneously felt severe pain and noticed a swelling on the right side of his scrotum. He stated that this was the third time that the hernia had come down, but that on the two previous occasions he had been able to return it and that he wore an improvised suspensory bandage to keep it in place. He stated that the bowels had been constipated since the hernia came down. On the night of his admission the patient was very restless and vomiting of a stercoraceous character set in. He was seen by Lieutenant-Colonel Burke on the morning of the 31st and at 11.30 A.M. was put under the influence of chloroform.

On opening the sac a quantity of liquid fæces escaped. The hernia was found to be a large enterocele containing many coils of ileum much inflamed and matted together, while one loop was in a gangrenous condition, and in this portion a perforation of the gut had taken place. After freeing the constriction, which was at the internal abdominal ring, Lieutenant-Colonel Burke decided to resect the whole of this gangrenous gut and to suture the cut ends. The mesentery was divided gradually and was ligatured piecemeal with catgut sutures. The cut ends of the gut were brought into careful apposition by a series of catgut Lembert's sutures, after which the united gut was inflated like a bicycle tube. The whole hernia was then returned cautiously into the abdomen and the sac was divided above and closed with catgut sutures and returned into the abdomen, and the pillars of the ring were sutured with two deep silkworm gut sutures. A part only of the lower portion of the sac was removed and, contrary to his usual practice, Lieutenant-Colonel Burke did not dissect out the whole sac, as the patient's condition was such as to indicate the advisability of rapidly terminating the operation. A small rubber drainage-tube was put in and a counter opening was made in the scrotum below. The wound was then closed, silkworm gut being used for the buried sutures and silk for the skin sutures. The antiseptic used before opening the sac was biniodide of mercury; afterwards boric acid and saline solution were employed. One hypodermic injection of digitalis and ether was given during the operation.

The patient was fed entirely by enemata (eggs, milk, and brandy) for four and a half days and on the evening of the fifth day a drachm of Brand's essence of beef was given every three hours. On the sixth day besides this he was allowed by the mouth an ounce of a mixture of one part of cream to two parts of barley water. On the ninth day he was given four ounces of Benger's food every two hours in addition. The nutrient enemata were gradually discontinued, while his food by the mouth was gradually increased, but he did not resume his ordinary diet until four weeks after the operation. During the first 24 hours after the operation the patient passed five stools which were offensive and contained blood-stained serum, but from that time the stools became normal in appearance and free from abnormal fœtor.

The wound was dressed on April 1st and the drainage tube was removed; subsequently it was dressed every third day and finally every fourth day only. There was no suppuration; the patient never complained of any pain. A little thickening remains around the cord where the lower portion of the sac was left; the hernial opening is apparently permanently closed. The patient walked on the twenty-seventh day and left the hospital on May 5th. The temperature after the operation never rose above 100° F. and it reached that point on two occasions only; it was usually normal or subnormal.

Remarks by Lieutenant-Colonel BURKE.—I consider that this case is worth reporting as the result was much better than what I could have expected if I had followed the course usually adopted in a case such as I have described—viz., the removal of the gangrenous gut and the making of an artificial anus, which would either have remained or have had to be dealt with by a subsequent partial laparotomy with greater resultant tendency to hernia. Mr. William Thorburn,[1] in an interesting paper on an analysis of 110 operations for strangulated hernia, says: "The condition of the intestine varied within the widest limits, *but actual gangrene or perforation had occurred in ten instances only*"; also that in nine of [illegible] by Mr. Thorburn was resection of the gut practised and both of these cases died within a few hours. I hope, therefore, that this case may be of some interest to the profession.

I may add that I was assisted at the operation by my house surgeon, Assistant-Surgeon Lafond, and for the careful nursing of the case I am indebted to charge-nurse Flynn.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

Exhibition of Specimens.—Chorion epithelioma.

A MEETING of this society was held on June 3rd, Dr. EDWARD MALINS, the President, being in the chair.

Specimens were shown by Lieutenant Colonel A. J. STURMER, I.M.S., Dr. F. W. N. HAULTAIN (Edinburgh), Dr. P. HORROCKS, Dr. H. BRIGGS (Liverpool), Dr. T. G. STEVENS, Dr. J. M. MUNRO KERR (Glasgow), Dr. F. W. [illegible] on Chorion- [illegible] theliomatous [illegible] stomata and gave a demonstration illustrated by specimens and lantern slides. Dr. Teacher discussed and illustrated by drawings and photographs of microscopic preparations the nature and origin of chorion-epithelioma and its relations to the placenta.

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[1] Brit. Med. Jour., April 25th, 1903.

showed a girl, aged nine years, with a large Post-Pharyngeal Swelling which had been first noticed nine months previously and had latterly increased in size to such an extent as to cause some difficulty in breathing during sleep. A number of enlarged glands were present below the angle of the jaw on the right side These had been noticed shortly after an attack of measles three years previously. The child appeared to be in good health and no family history of tubercle was available. Mr. Waggett said he believed the swelling to be a broken-down tuberculous mass.—Dr. E. Furniss Potter showed a case (previously exhibited at the last meeting) of a man who had had a large Swelling on the Right Side of the Naso-pharynx which completely obscured the right choana, in which the diagnosis was uncertain (possibly malignant disease or gumma). Under the administration of iodide of potassium the swelling had completely disappeared.—Dr. V. H. Wyatt Wingrave showed a case of Supranasal Cyst in an Infant, aged 15 months.—Dr. L. H. Pegler exhibited a section of Recurrent Growth of the Septum.—Mr. P. de Santi showed (1) a case of Gumma of the Epiglottis which had disappeared rapidly under the administration of iodide of potassium; and (2) a specimen of a large Fibro-lipoma of the Larynx.—Mr. F. J. Steward showed (1) a case of Infiltration of the Soft Palate of doubtful nature; and (2) a specimen of Epithelioma of the Pyriform Sinus.—Dr. W. H. Kelson showed a case of Laryngeal Fistula. The patient was a man, aged 58 years, who had cut his throat in November last.—Dr. H. L. Lack showed (1) a case of Thickening of the Left Vocal Cord with deficient movement of some months' duration; and (2) a case of Multiple Sinus Suppuration showing the results after operation on the sphenoidal sinus with a new instrument.—Dr. H. Tilley showed a boy, aged six years, with a freely moveable Pedunculated Tumour of the size of a Tangerine orange growing from the right tonsillar region. The tumour had been first noticed two months previously. Since that period it had been twice removed but had rapidly recurred. It did not bleed when manipulated. There was a small hard gland freely moveable behind the angle of the right jaw.—Sir Felix Semon was of opinion, having regard to the rapid recurrence after removal and the present appearance, that this would be found to be a malignant growth.

MEDICO-LEGAL SOCIETY.—A meeting of this society was held on June 9th, Sir W. J. Collins, the President, being in the chair, when the adjourned discussion upon Dr. J. G. Garson s paper on the Position of Medical Jurisprudence in London, especially in Reference to the Investigation of Cases of Death from Violence, was continued, followed by a paper by Dr. W. Wynn Westcott on the Overlying of Infants. A paper by Dr. P. Smith on the Workmen's Compensation Act and one by Mr. R Henslowe Wellington on the Recent Southwark Poisoning Trial made up an interesting agenda which brought the session of this newly organised society to a close.

Reviews and Notices of Books.

The Elements of Pathological Anatomy and Histology for Students. By WALTER SYDNEY LAZARUS-BARLOW, B A., B.C., M.D. Cantab., F.R.C.P. Lond., Pathologist and Lecturer on Pathology at the Westminster Hospital. London: J. and A. Churchill. 1903. Pp. 705 Price 24*s.*

AS is explained by the title this text-book is intended to introduce the student to the study of pathological anatomy and histology. The author believes (and we agree with him) that it is better to explain fully the main types of pathological change than to attempt to give a description of numerous subvarieties or, in other words, that the teaching of the principles governing variations is of more use, particularly in pathology, than the teaching of the names and appearances of the numerous subvarieties themselves.

The book is divided into two parts; the first deals with General Pathological Anatomy and Histology and the second is concerned with the Pathological Anatomy and Histology of Special Organs and Tissues. Each part is further subdivided into sections instead of into chapters. The retrograde changes are first considered and an excellent account is given of atrophy and hypertrophy, the fatty change, cloudy swelling, the lardaceous change, and other pathological conditions connected with degenerative processes, including gangrene and caseation. These subjects present considerable difficulties to the student for their full comprehension; Dr. Lazarus-Barlow, however, describes them in such lucid terms that the reader has no difficulty in grasping his meaning. Obscure terms are avoided and purely theoretical questions are but lightly touched upon.

Section II. on Inflammation will be found to contain a mass of information. After a consideration of the "cardinal signs" of inflammation, "redness, swelling, heat, pain, and impairment of function," some interesting remarks are made on "cellular changes in inflammation," chemiotaxis, and phagocytosis. The student will also find much material for study under the heading, "Types of Inflammation." The classification adopted is a comprehensive and practical one: (*a*) infective; (*b*) specific; (*c*) acute; (*d*) chronic; (*e*) interstitial and parenchymatous; and (*f*) catarrhal inflammation. Then follow sections on the Sequels of Inflammation, the Anatomical and Histological Appearances of certain Specific Inflammations, and the Chronic Fibroses. All of these conditions are ably and fully described.

The description of New Growths or Neoplasms occupies five sections. In a text-book of pathological anatomy and histology the value of the work largely depends upon the nature of the illustrations or perhaps it would be better expressed by saying that the value of such a work is greatly increased if the illustrations are not only numerous but are true to nature. Dr. Lazarus-Barlow may certainly be congratulated on the success that has attended his efforts in this direction Photography has not been used in making the microscopical drawings; Dr. Lazarus-Barlow maintains that the interpretation of micro-photographs needs special training which the student has not had. We consider that he is quite right in his contention and that micro-photographs for teaching purposes have proved distinctly disappointing. The drawings for this work have been made by a non-medical artist (the author's wife), in order that they may represent faithfully the appearances as seen by the elementary student when looking down the microscope and are not semi-diagrammatic. The drawings are beautifully executed and are perfectly true to the originals. The lack of resemblance between many drawings in text-books and corresponding microscopic sections given in class seems so great to students that the illustrations are often more of a hindrance than a help, but this statement by no means holds good with regard to the work now under consideration. We have made these remarks at this stage of our review as they apply particularly to the representation of microscopic sections of new growths. Without such illustrations the student would find it impossible to realise the conditions which were being described. The classification of neoplasms here adopted is a good one and one well adapted for the instruction of students. In addition to illustrations showing the structure of the more common growths there are some very good drawings of sections of capillary and venous angioma, glioma, rhabdomyosarcoma, leiomyoma, and papillomatous cystadenoma.

In Part II. the Pathological Anatomy and Histology of the Special Organs and Tissues are described, commencing with the pathological histology of the blood. The changes in number and appearance of the red and white cells which occur in diseased conditions are clearly and fully set forth. Much stress is now laid on the various forms of leucocytes which may present themselves as aids to both diagnosis and prognosis and it is desirable that the student should acquire some knowledge of the subject. In the section devoted to this matter the results of the most modern researches are recorded, all doubtful and obscure points being excluded.

In the next section the changes affecting the Heart, Pericardium, Arteries, Veins, and Lymph Channels are described. As the author points out, in most instances all these parts of the vascular system are affected together, but for convenience of description it is certainly preferable that the diseases of each should be taken separately. The morbid conditions which may attack the endocardium are most lucidly described. The remarks on ulcerative endocarditis, however, do not, in our opinion, maintain the high standard which is so marked throughout most of the work. The varieties of the affection are not sufficiently dwelt upon, so that the distinction between primary and secondary infective endocarditis is almost lost sight of.

The section on the Pathological Anatomy and Histology of the Bones gives evidence of the care which has been bestowed on a subject which presents great difficulties to the student. The same may be said of the following section which deals with Affections of the Joints, Muscles, Tendons, and Bursæ. The pathological changes undergone by the joints are of the most diverse nature but Dr. Lazarus-Barlow has succeeded in describing these changes in terms which convey a maximum of information.

The Diseases of the Digestive and Respiratory Tracts and of the Urinary Organs are also most ably considered and sections are also to be found on Morbid Changes which occur in connexion with the Skin and its Appendages and in the Eye and Ear, the final section of this volume being devoted to Affections of the Nervous System.

Taking the work as a whole, we consider it one of the best text-books on pathological anatomy and histology which we have read and we can cordially recommend its use to students preparing for examinations and to practitioners who wish to refresh their memory on the subjects with which the book is concerned.

Diseases of the Skin: their Description, Pathology, Diagnosis, and Treatment. With Special Reference to the Skin Eruptions of Children and an Analysis of 15,000 Cases of Skin Disease. By H. RADCLIFFE CROCKER, M.D., F.R.C.P. Lond., Physician for Diseases of the Skin in University College Hospital, &c. Third edition, with Four Plates and 112 Illustrations. London: H. K. Lewis. 1903. Vol. I., pp. xxxii. and 672; Vol II., pp. 715. Price 28*s*. net.

IT is always a pleasure to read a work written by one who is a master of his subject and the perusal of this edition of this work would convince any member of the medical profession that it was indeed the production of an authority on dermatology. Even when the first edition of the work appeared in 1888 it was at once recognised as a standard work of dermatology and, in fact, it rapidly took its rightful place as the most important treatise on that subject which had ever issued from the British press. The second edition seemed but to enhance, if that were possible, the reputation achieved by the first and we feel sure that all competent judges, both in this country and elsewhere, will agree in looking upon it in its third edition as the greatest, most thorough, and most trustworthy treatise on the diseases of the skin.

It is very curious to consider the attitude maintained by a large proportion of the medical public towards dermatology. Diseases of the skin are looked upon as inscrutable mysteries; eczema and psoriasis and a few other of the commoner cutaneous diseases may be recognised and treated, but in the diagnosis and treatment of any of the diseases less frequently seen the average medical man at once feels himself out of his depth. This state of things should not be and it is to be attributed partly to the somewhat elaborate nomenclature by which nearly every cutaneous disease has at least two or three names and most of the names are applicable to several distinct diseases. One great cause of the difficulty which many find in dermatology is that we are able to distinguish many more forms of disease as the skin is exposed to view than would be possible in the case of an internal organ. There is, however, no department of medicine in which a fair knowledge can be more readily obtained and a very little study devoted to dermatology would be amply repaid.

At the present time there is no dearth of useful text-books and a careful study of any of them would be followed by a great increase of the interest with which the medical practitioner meets with a case of disease of the skin. Many rare diseases would be recognised which are now readily and hastily included under "eczema" and dermatological science would benefit by a widening of our knowledge. The recent increase in the extent of the science of cutaneous disease is evidenced by the increase in the size of the work under notice. Formerly it was contained in a single volume but now it has been found necessary to divide it into two Many new articles have been added and most of these deal with "new" diseases and some of them by no means unimportant.

A strong point in this work has always been the histology of cutaneous disease, for this is a department of dermatology in which the author has done much original work, and the treatment is given with especial fulness and care A very useful feature is the copious bibliography which is given with each disease, so that the reader is able readily to refer to the original articles if he wishes to obtain further information.

Dr. Crocker has analysed 15,000 cases of skin disease of which 10,000 occurred in his hospital practice and 5000 in his private practice. It is of interest to compare the relative frequency of various skin diseases in the two classes, but as the author points out there are many modifying factors which prevent the two sets of numbers being really representative of the relative frequency of disease in the poorer and richer classes of the community. For few patients go to a consultant who have not already been treated by their family practitioner, so that the private cases are representative rather of the more severe and inveterate cases than of skin lesions as they occur among the wealthy.

We may say, in conclusion, that the chief characteristic of Dr. Crocker's work is the well-balanced judgment which it manifests. Whilst he describes all the theories of etiology and all the methods of treatment which have been advocated he is able from the wide extent of his experience to weigh carefully the arguments advanced and the claims made and to express an opinion which accurately represents the present condition of our knowledge. We extend a cordial welcome to the third edition.

The Surgical Diseases of the Genito-Urinary Organs. By E. L. KEYES, A.M., M.D., LL.D., Consulting Surgeon to the Bellevue and the Skin and Cancer Hospitals, Surgeon to St. Elizabeth Hospital, &c.; and E. L. KEYES, Jun., A.B., M.D., Ph.D., Lecturer on Genito-Urinary Surgery, New York Polyclinic Medical School and Hospital, Surgeon to the Out-patient Department, St. Vincent's Hospital, &c. With 174 Illustrations in the text and ten Plates, eight of which are coloured. London and New York: D. Appleton and Co. 1903. Pp. 827.

IN 1867 appeared van Buren and Keyes's treatise on Genito-Urinary Disease and Syphilis and in 1888 appeared a much modified second edition, and this volume now appears representing the third edition with a limitation of its scope, because the subject of syphilis has been excluded, for though it is a genital disease in its usual mode of infection, it is not genital in its mode of expression and therefore has no necessary connexion with the genito-urinary tract. On the other hand, gonorrhœa has been nuclei will be developed. After further staining the film may be washed in distilled water, dried in air, and mounted in xylol balsam.

(1) LECITHOL; AND (2) GONOSAN.

(THOMAS CHRISTY AND CO., 4, 10, AND 12, OLD SWAN-LANE, UPPER THAMES-STREET, LONDON, E.C.)

(1) We have received specimens of "perles" each of which contains 0·05 gramme of lecithol or ovo-lecithin dissolved in olive oil. The value of ovo-lecithin as an organic phosphorus compound in diseases of nervous origin is well known. Tablets of chocolate are also prepared suitable for administering ovo-lecithin to children. Each "square" contains 0·05 gramme of ovo-lecithin. (2) "Gonosan" is the ugly compound name given to a solution of the essential resins of kava-kava, the root of *Piper methysticum*, in pure sandalwood oil. The root has been used from time immemorial in the Polynesian islands for gonorrhœa. The combination is said to diminish pain, to hasten the disappearance of the discharge, and to prevent complications.

GLEN SPEY GLENLIVET WHISKY.

(W. AND A. GILBEY, LTD., THE PANTHEON, OXFORD-STREET, LONDON, W.)

The analysis of this whisky was as follows: extractives, 0·36 per cent.; alcohol, by weight 41·30 per cent., by volume 48·75 per cent., equal to proof spirit 85·43 per cent. The whisky contained the following amounts of secondary constituents recorded in grammes per hectolitre of absolute alcohol present: acidity reckoned as acetic acid, 84·42; aldehydes, 10·05; furfural, 2·67; ethers reckoned as ethyl acetate, 79·59; and higher alcohols, 201·00. These results of analysis are thus in favour of the statement on the label being an honest description—that is, that the whisky is a pure malt spirit distilled exclusively from barley. The age is stated to be six years and our analysis at any rate indicates an amount of storage sufficient to make the whisky mature and free from the injurious products of new whisky. The flavour is decidedly malty and smoky though soft and mellow. The evidence of both the palate and chemical analysis is thoroughly in accordance with the description given of the whisky on the label of the bottle; it is a matured all barley-malt whisky.

LAMA QUINA WINE.

(GRAINGER AND SON, 21, MINCING-LANE, LONDON, E.C.)

This wine is described as "*vin tonique naturel.*" It is a syrupy red wine of port style, showing a similar alcoholic strength. It is slightly bitter to the taste and contains cinchona bark extractives. Analysis gave the following results: alcohol, by weight 21·30 per cent., by volume 26·04 per cent., equal to proof spirit 45·63 per cent.; extractives, 12·81 per cent.; mineral matter, 0·31 per cent.; sugar, 10·40 per cent. It is stated "*ce vin est pur sans addition d'alcool,*" which cannot strictly be the case since all port wine is fortified and the strength of Lama Quina wine is far beyond that which normal fermentation can yield. As a rule, we do not approve of "medicated" wines; when the patient requires a drug it should be prescribed for him by a qualified medical man, when he requires wine he will be wiser to get the pure article unmedicated.

TRISCUIT.

(THE SHREDDED WHEAT CO., 6 AND 8, EASTCHEAP, LONDON, E.C.)

The "triscuit" forms a palatable and nourishing article of diet and the statement that it consists of the whole wheat berry is borne out by our analysis. Further, in the course of preparation part of its nourishing constituents is converted into a soluble state. The "triscuit" consists of a series, so to speak, of wheat filaments interlaced in such a way as to present the appearance of a lid of a miniature wicker basket. Our analysis gave the following results: moisture, 7·30 per cent.; starch, 66·27 per cent.; soluble starch, dextrin, &c., 9·00 per cent.; proteids, 13·93 per cent.; fat, 2·20 per cent.; and mineral matter, 1·30 per cent. The "triscuit" is somewhat hard and crisp which should be a dietetic advantage since it requires complete mastication before it can be swallowed, in the same way as does dry toast or stale bread. The flavour is "wheaten" and "nutty." The analysis shows that "triscuit" is an entirely unimpoverished wheat food.

MALTA VITA FOOD.

(THE MALTA VITA PURE FOOD CO., 102, FENCHURCH STREET, LONDON, E.C.)

According to our analysis and examination "malta vita" consists of a cereal food modified by malting and cooking The carbohydrates are to a very large extent easily soluble in cold water. The preparation consists of crisp flakes which have been browned by baking. It has a very pleasant biscuit-like flavour. The results of our analysis were as follows: moisture, 7·00 per cent.; starch and dextrin, 59·31 per cent.; maltose, 14·28 per cent.; proteid, 14·55 per cent.; fat, 2·16 per cent.; and mineral matter, 2·70 per cent. This analysis is satisfactory and shows that the food contains an excellent proportion of all classes of nutritive material.

CHELTINE SOLUBLE MALTOSE FOOD.

(CHELTINE FOODS, LIMITED, CHELTINE WORKS, CHELTENHAM.)

We find this food, according to our analysis, to be correctly described and no exception can be taken to the claims made in regard to its suitability for infants and invalids when prepared in the way directed. The food is almost entirely soluble in water and contains no starch. Our analysis gave the following results: moisture, 3·90 per cent.; malt and milk sugar, 50·44 per cent.; dextrin and other carbohydrates, 34·06 per cent.; fat, 1·40 per cent.; and mineral matter, 2·30 per cent. The preparation by itself is, of course, deficient in fat, but the food is intended to be made with milk and thus a product is obtained which contains an excellent proportion of all classes of nutritive material.

KOPA'S FOOD.

(L. KOPA AND CO., 28, GLASSHOUSE-STREET, REGENT-STREET, LONDON, W.)

We can find no dietetic novelty about this preparation. It contains cocoa and certain carbohydrates. The total nitrogen amounted to 1·65, the moisture to 10 per cent.; and the mineral matter to 4·50 per cent. The somewhat high proportion of mineral matter is due in some measure to the cocoa present.

KROOMDA CURRIES.

(MESSRS. C. DICKINSON AND CO., 30, MIDDLESEX-STREET, ALDGATE, LONDON, E.C.)

These curry preparations are certainly good and make an excellent dish. They are based on a quite simple formula of someone who has resided in India and with whom we quite agree that the curries sold in England are not at all like the original kind. Even when the curry powder may be good the average English cook knows little or nothing about preparing a satisfactorily seasoned dish with it. We have examined "curry gravy" and "prawn curry," both of which require no preparation except warming to a degree suitable for serving. In the former case, of course, any material suitable for "currying" may be added and the whole may be cooked slowly for a few minutes. We could trace no objectionable constituents in the preparations and there was no evidence of metallic contamination. The prawns in the prawn curry were somewhat tough.

EAU DE TOILETTE (LUBIN).

(PARFUMERIE LUBIN, 11, RUE ROYALE, PARIS.)

This is a very agreeable preparation for the toilet; it is fragrant, aromatic, and has a soothing effect upon the skin. According to our examination it yielded 2 per cent. of residue on evaporation which consisted largely of glycerine. It is a very pleasant and wholesome adjuvant to the toilet.

THE LANCET.

LONDON: SATURDAY, JUNE 20, 1903.

A Week of Munificence.

THE week immediately previous to Hospital Sunday was remarkable for the outburst of public benevolence directed towards the Metropolitan Hospitals. On June 7th their Majesties the KING and QUEEN attended the afternoon service at St. Paul's Cathedral. The service was, as all our readers know, in connexion with the Hospital Sunday Fund, that annual occasion being observed in the metropolitan cathedral one week before the date fixed for Hospital Sunday in other places of worship. The remarkable sum of upwards of £5000 was received at the collection which followed upon the Bishop of STEPNEY's eloquent address, a sum which we think has never before been received at any church collection made for civil needs. On June 8th the KING attended a dramatic performance at His Majesty's Theatre where Mr. TREE and his accomplished colleagues provided a splendid theatrical entertainment, the pecuniary receipts at which were handed to Guy's Hospital. An historic tragedy by Mr. ALFRED AUSTIN, the official poet laureate, and a neat adaptation from a well-known story by Mr. RUDYARD KIPLING, surely the poet laureate of the people, were played, and the exchequer of Guy's Hospital gained by £2100. On June 9th an enormous concourse of ladies and gentlemen attended a ball at Albert Hall in aid of the London Hospital, and it is anticipated that the charity will benefit to the extent of at least £4000. On June 10th a bazaar was opened at the Prince's Skating Club in aid of the Royal Free Hospital. The public, as well as the world of fashion, flocked to it and we understand that the admirable institution in the Gray's Inn-road may expect to receive a substantial addition to its funds through the strenuous endeavours of the stall-holders. This is a very remarkable group of events to have occurred on four consecutive days and shows that the public are really alive to the needs of the London hospitals—are really growing more appreciative of the work that is done in them and of the responsibilities that they discharge despite their precarious pecuniary position. It should be added that during the week over £700 were received by King Edward's Hospital Fund for London, showing that the extraordinary collections that were being made and the imminent approach of Hospital Sunday had no tendency to arrest the flow of day to day benevolence.

Leaders of society, whether leading by right of royal position or by the possession of brains, birth, or money, have all contributed to this admirable flow of munificence towards the London hospitals, and by so doing are furnishing the sociologist with a lesson that he cannot but learn while depriving the cynic of some of his cheapest sneers. The young writer, who has not yet arrived, and the older writer, who feels that he is beginning to depart, are each prone to run amok at leaders of society and to describe them as wholly given up to the pursuit of wealth and pleasure, as being meanly subservient to those who can enrich them or minister to their ambitions or feed them, but callous to the needs of those from whom they can hope to receive no advantages. Of course there are such people, but it should give pause to the writers who describe all society as composed of them—"pigs in clover" as a recent clever novel has labeled them—when the part that is being played by the KING, his Court, his blood relations, and his friends in the movement, now taking an organised shape for raising the metropolitan hospitals from their slough of debt, is considered. In addition to the various sums received in the manner that we have recorded, mention should be made of other functions taking place last week, all of which constituted an expression of public interest in hospital work and the care of the indigent sick, and with all of which members of the Royal Family were happy to associate themselves. On June 8th the PRINCESS OF WALES opened a new nurses' home in connexion with the Lying-in Hospital, Endell-street, W.C., and on the same day the Duchess of ALBANY opened the new buildings of the Kingston Nursing Association. On June 11th the KING and QUEEN made a personal visit to the London Hospital, where HIS MAJESTY inaugurated a new out-patient department, the cost of the construction of which has largely been defrayed by a splendid anonymous gift, while his Consort opened the new rooms for the treatment of the sick by the Finsen light, a method of therapy in which HER MAJESTY has already displayed practical and generous interest. On the same day the Duke of CONNAUGHT presided at the festival dinner of the Royal Blind Pension Society and PRINCESS HENRY OF BATTENBERG was present at the meeting of the Colonial Nursing Association at the Royal Hospital, Chelsea. On the last day of the week PRINCESS LOUISE (Duchess of Argyll) opened the new buildings of the Hospital for Epilepsy and Paralysis in Maida Vale. Such actions cannot fail to be of the greatest use in displaying the urgency of the needs of many of our London hospitals. By the presence of the Royal Family and their *entourage* upon these occasions a measure of publicity is secured that could be secured in no other way, and it is undoubted that the awakening of the general public conscience to their debt towards the noblest of our charities, which we consider now to be taking place, has been largely due to the acts and words of the KING and his family.

"Charity uncovereth a multitude of shins," said the flippant person in the play, alluding to the prevalence a few years ago of amateur skirt-dancing at entertainments given with benevolent object. The jibe was not intended as a compliment to the dancers and it is not unusual to hear remarks derogatory of balls, dramatic performances, and bazaars which have their *rationale* in a collection for a hospital. Why, it is asked, cannot hostesses and guests, actors and audience, enterprising stall-keepers and defrauded purchasers, alike send their cheques to the hospitals without expecting discount in the nature of some form of dissipation? The question is easily answered. The needs of a charity cannot be understood by everyone at a glance, but a bazaar, a dance, or a play needs no explanation. We, who know the value of medical charities and their sore need of support, marvel at what we are too ready to think is the callousness of those who appear to demand amusement for themselves before they will contribute to the funds of the hospitals. The public is not callous but rather uninstructed. If it were possible to make the needs of charity as clear to a thoughtless world as are the delights of a dance it is certain that many would cheerfully give their money without asking for discount in the shape of entertainment. But as it is not possible, wise people view with equanimity the accepted methods of extracting subscriptions and are grateful to the leaders of society for their labours on behalf of the sick poor.

The Summer Session of the General Medical Council.

THE summer session of the General Medical Council was a singularly uneventful one. The most important debate ranged round the unfortunately strained relations between the Council and the two great English medical corporations, and upon this subject we have already expressed our views. The rest of the session was largely taken up by the hearing of penal cases. These cases, as Sir WILLIAM TURNER foreshadowed in his opening address that they would be, were unusually numerous and in many of them the characters of the medical men in question were seriously involved. As a consequence the profession awaited with interest the methods of the General Medical Council in dealing with them, and the verdict of acquittal that most of those implicated secured, either with or without modification, has not been hailed as quite satisfactory. Let us not be understood as arguing that any particular accused medical man has been able to retain his place on the Register when he should have been removed from it; to make such a suggestion would be grossly unfair to all parties. For this reason we are unable to publish the communications that we have received, or to do more than to quote generally the impression that we know to have been created; but it is useless to disguise the fact that the sterile result of the work of the Council as a penal body has given rise to much adverse comment. Last week a correspondent, noting that certain charges of "infamous conduct in a professional respect" had been dismissed by the Council as non-proven, called attention to the stigma that has been affixed upon innocent people, and undoubtedly this is a point of view worthy of consideration; but it is merely a side-result of the circumstances. No charges are heard by the General Medical Council or preferred by either of the medical defence associations without deliberation; anonymous accusations are not attended to. We have every sympathy with those gentlemen against whom charges are brought without being sustained, but we cannot subscribe to the view that such charges are, as a rule, made in a spirit either of vindictiveness or hasty irresponsibility. The large proportion of non-proven verdicts that are found by the General Medical Council in the penal cases that come before it is due to the determination of the Council to convict only upon the most incontrovertible evidence. The members of the Council do not form a legal tribunal, they are at a disadvantage compared with a law court in taking evidence, and they possess but one punishment for all professional sins. The most shameful breach of honour or morality and the most trivial and accidental lapse from the code of professional ethics must, if punished, be punished alike by erasure from the Medical Register. The Council rightly declines to exercise its tremendous power save upon the clearest grounds, for it recognises that removal from the professional roll means the ruin of the sentenced man. Strong suspicion of a practitioner's methods may lead to a perfectly legitimate accusation of him before the General Medical Council and yet the Council may be right in acquitting him. The number of non-proven verdicts does not connote in our minds any supineness on the part of the General Medical Council; it only serves to remind us how unfortunate it is that the Medical Acts supply the Council with such clumsy machinery with which to arrange a penal code. It is to be hoped that the short Bill now before Parliament, which provides for temporary removal from the Register of the names of offenders, will soon become law so that the Council may be able to attempt in some degree to fit the punishment to the offence.

The Trinidad Epidemic.

OUR readers will doubtless recall that some weeks ago[1] we directed attention to the singular conflict of opinion that had arisen between the medical authorities of Trinidad and Barbados respecting the outbreak in the former island of an epidemic eruptive disorder which bore very marked resemblance to the outbreak of small-pox from which Barbados has recently suffered, at great loss to her trade in consequence of quarantine restrictions. It will be remembered that Mr. J. F. E. BRIDGER, who was familiar with the character of the Barbados disorder, had been sent to report on that of Trinidad and that the tenour of his report was to the effect that undoubtedly Trinidad was the seat of small-pox, which was spreading through this land mainly because its true nature was being disregarded and patients were being allowed to go about while still in an infective state. The profession in Trinidad had expressed its dissent from Mr. BRIDGER'S conclusions and appeared to regard the disease as something new, being largely influenced by the mildness of its type. We endeavoured to reconcile these conflicting opinions and pointed out that for the last few years a similar mild eruptive varioloid disease had been extending over Canada and the United States, and we considered that from the epidemiological standpoint it was highly probable that the disease, whatever it might be called, was the same in all these places. We even ventured to think that in view of the grave interests involved it might be well if an authoritative opinion by experts could be obtained by personal investigation of the Trinidad cases.

It is with a sense of relief which will be shared by all nosologists, that we are now enabled to record a distinct change in the views of the Trinidad authorities. We have before us a copy of a leaflet issued by the medical officer of health, headed "The Prevailing Epidemic: How to *Prevent* it Spreading," which compels the conviction that the disease is *now* recognised (the leaflet was issued in May) to be small-pox, although that dreaded word does not appear in its paragraphs. Moreover, a note is appended which states that its recommendations have been "submitted to the medical practitioners and have been generally approved of by them." These recommendations are drawn up clearly and concisely, and convey very plain directions as to the means to prevent contagion. There is not one of them which is not applicable to small-pox, whilst some show plainly that this is the disease which is in the minds of the authorities.

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[1] THE LANCET, April 18th (p. 1121) and May 2nd (p. 1248), 1903.

We may briefly mention a few of the points which justify the above conclusion. The leaflet opens with the statement that "the disease is not in the air, as is generally supposed. It is catching and usually shows itself *about 14 days* after exposure to the source of infection." (The italics in this and other cited passages are ours) Here is a statement which proves that the incubation period of the Trinidad disorder is the same as that of small-pox. Like that disease it is emphasised that it spreads from person to person and the first and second recommendations deal with measures to be taken to avoid contagion from the sick, including the disinfection of bedding and clothing. No. 3 states that "the disease is catching until the spots are dry and *until all the dead skin has fallen off.*" This view was not apparently held at the time of Mr. BRIDGER'S visit, for he reported that cases were not detained in hospital then so long as is usually deemed necessary in cases of small-pox, and to this neglect he attributed much of its spread It need hardly be said that the statement strictly conforms to the general belief as to the infectivity of variola. Upon it is based the recommendation for persons who have the affection, "even in a mild form," to keep themselves apart from others and to abstain from occupations and trades which may be the means of conveyance of the contagium until the period of infectivity is passed. "Children suffering from the disease or *coming from a house affected by it* should remain away from school until they have fully recovered from it." Clearly the disease is regarded as being quite as infectious as small-pox, and it is further recommended (No. 6) that "all healthy persons should avoid coming into close contact with persons suffering from the disease."

It might be said that it does not follow that there should not be a "third disease," a "varioloid varicella" or whatever it may be termed, just as infective as variola and having a similar incubation period, to which all the foregoing recommendations are applicable. Granting this it would hardly be in accordance with scientific knowledge to find the hybrid disorder influenced by vaccination, as is now admitted to be the case. We say "now admitted" because, if we mistake not, in the earlier stages of the controversy a great point was made against the Trinidad disease being variola because it bore no relation to vaccination. Mr. BRIDGER adduced evidence to the contrary and we now find the Trinidad medical officer writing: "It has been found by experience that persons who have been *recently vaccinated* (that is, within about two years) *as a rule escape the disease,* or get it in a mild form only. *All persons not thus protected are strongly recommended to be vaccinated.*" We regard this as establishing the truth of Mr. BRIDGER'S contention that the Trinidad and Barbados outbreaks are one and the same disease, each being of the nature of small-pox. We would fain hope that the change which has obviously come over the minds of the Trinidad profession on this question will be frankly and freely admitted. It can hardly be that Trinidad, which imposed such restrictive quarantine on Barbados's commerce, is endeavouring to avoid a similar fate by declining to state openly, what is tacitly admitted, that the "prevailing epidemic" which in Paragraph 8 is termed "the pox," is the disease known throughout the world as "the small-pox."

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Sanitary Inspectors and their Powers.

THERE is still, it would seem, some virtue in the principle that an Englishman's house is his castle. This, at any rate, is a legitimate inference from a decision recently given by Mr. ROSE at the West London Police-court in regard to proceedings taken by the Fulham Borough Council against a person who refused admission to one of its sanitary inspectors. It was believed that ice-cream was manufactured on the premises and it was claimed on behalf of the council, in its capacity as sanitary authority, that this fact afforded sufficient ground for the inspector's entry. After adjourning the case for due deliberation Mr. ROSE came to the conclusion that under the terms of the Public Health (London) Act, 1891, there is no indiscriminate power of entry and the summons was consequently dismissed with costs.

The council, by its solicitor, relied upon Section 116 which contains the following words:—

> "If any person wilfully obstructs any member or officer of a sanitary authority or any person duly employed in the execution of this Act he shall be liable to a fine not exceeding £5"

At first sight this would appear to supply adequate powers. It is, however, a principle in the interpretation of statutes that where a matter which might be covered by general expressions is separately and specifically dealt with elsewhere it is thereby removed from the operation of the wider clause. Such separate treatment of the powers of entry is in this case to be found in Section 115 It may therefore be assumed that refusal to admit is not a wilful obstruction of the kind meant to be provided against by Section 116 and this view is strengthened by the order of the sections.

The liability to the £5 fine appears to attach only to the three cases of refusal which are mentioned in Section 115 (2) (*b*) and which are briefly:—

i. Where entry is for the purpose of carrying into effect an order of a court of summary jurisdiction.

ii. Where "it is proved that the refusal or failure is with intent to prevent the discovery of some contravention of this Act or any by-law under this Act"

iii. Cases coming under special enactments.

Of these only ii., which is therefore given verbatim, could have any applicability to the present case and it was excluded by the fact that it was not alleged that any nuisance was caused by the defendant's business.

The only machinery available is consequently that supplied by Section 115 (3) which is to the following effect:—

> "If a justice is satisfied by information on oath (*a*) that there is reasonable ground for such entry and that there has been a refusal or failure to admit to such premises, and either that reasonable notice of the intention to apply to a justice for a warrant has been given or that the giving of notice would defeat the object of the entry; or
>
> (*b*) That there is reasonable cause to believe that there is on the said premises some contravention of this Act or of any by-law under this Act, and that an application for admission or notice of an application for the warrant would defeat the object of the entry,
>
> The justice may by warrant under his hand authorise the sanitary authority or their officers or other person as the case may require to enter the premises," &c.

When action is taken in this way the penalty for obstruction becomes a fine not exceeding £20. It may well be considered whether a smaller penalty more easily obtained would not be more to the purpose.

Although no exception can well be taken from the legal standpoint to the judgment delivered by the magistrate its effects can hardly fail to be regrettable. The general public does not appreciate nice points of law and in so far as the average householder familiarises himself with this case he will probably conclude that he is justified by it in refusing admission to the sanitary inspector when he thinks proper. By acting in such a way he will materially impede the sanitary authority in its work while unconsciously laying himself open to even greater possibilities in the matter of punishment than those which he thinks he has escaped. The position of the sanitary inspector is often more than sufficiently difficult at present. He is not a welcome visitor in general and even with the weight of influence which his uniform brings to bear he meets with as many obstacles in the execution of his duty as can be interposed without his being roused to the drastic retaliation of a summons. The gusto can well be imagined with which the sweater or the purveyor of diseased meat will now shut the door in his face unless, and probably although, he comes armed with the formal warrant. Nor is the warrant always easy to get. The justice has a good deal of latitude in deciding what constitutes "reasonable ground" for entry and, as appears from the leading case of Vines *v.* North London Collegiate School, it is not enough to show that the sanitary inspector was acting honestly with a view to the discharge of his duties.

Nobody—except, perhaps, the proprietor—will question the expediency of having an ice-cream manufactory under close supervision by the sanitary authority, but if the authority has to be constantly hampered by the necessity of obtaining warrants the desired supervision can hardly be carried out in a satisfactory manner. It might be thought that in this instance assistance could be obtained from the portion of the Act devoted to the subject of unsound food. By Section 47 (1) (*b*) "any medical officer of health or sanitary inspector may at all reasonable times enter any premises and inspect and examine any article ...... deposited ...... for the purpose of sale or of preparation for sale," but it appears from Clause (6) of the same section that entry in this case also is controlled by the conditions already referred to as given in Section 115. It is possibly the result of some oversight in the drafting of the Act that the sanitary authority is so greatly restricted in its powers of entry. The matter is hardly one calling for special legislation, but when in the fulness of time the law relating to public health is brought up to date this important branch of the subject ought not to be neglected.

Annotations.

"Ne quid nimis."

THE PRINCE OF WALES ON THE RELATIONS OF THE PUBLIC AND THE MEDICAL PROFESSION.

The Prince of Wales made an admirable speech at the dinner in behalf of the Royal Medical Benevolent College last week, as our readers have been able to judge for themselves, and probably they consider, as we do, that the medical profession owes a deep debt of gratitude to His Royal Highness for his pronouncement upon the relations that should unite the public and the medical man. The intimate and trusted friend of his patients from their cradles to their graves was the picture which the Prince of Wales, as a member of the public, drew of the ideal medical man, and we are certain that this is the position to which all of us who are in family practice aspire The medical man's ministrations cannot be given merely in response to the ordinary laws of supply and demand. The grave and sacred responsibilities which he is compelled to assume beside the bed of sickness, responsibilities that may be wellnigh as important towards the patient's family as towards the patient, make it impossible that his relations with the public should be regarded merely from the point of view of mercenary service. Not a day goes by that more is not asked of the medical practitioner by some of his patients than can ever be repaid by money; and not a medical man among us but owns cheerfully that this is the circumstance of his life that brings sweetness into the round of toil. In the blackest hour of anxiety and in the brightest hour of hope the medical man is accepted as a friend whose sympathy may be assumed and whose unsparing efforts can be taken for granted. Is not this a proud position? But the practical side of the medical life must not be lost sight of, and it is undoubted that the pecuniary rewards of our professional career are not great. In particular it is exceedingly hard for the young practitioner to make any provision in the early days of practice for the future, so that early death—alas, not an uncommon thing when the work to be done is so arduous and dangerous—is apt to mean poverty (poverty, perhaps, of the direst sort) for a young widow and her children. Mainly to meet such terrible cases the benevolent side of Epsom College was founded and further support is asked for it upon the grounds indicated in the Prince of Wales's warm tribute to medical altruism. The public must always owe the medical profession a debt and they cannot pay it better than by subscribing to such an institution as Epsom College. The benevolent side of the College offers a shelter to the declining years of one set of pensioners and opportunities of a bright entry into life to another set. And whether it is the aged medical man or his widow whose infirmities preclude continuance of an unaided struggle for existence, or whether it is the little lad whose early orphanage has robbed him of his legitimate start in life—each is a legitimate object of public generosity. We are glad to see that the Prince of

Wales, in making this claim for the foundation of Epsom College in unmistakeable terms, laid stress upon the fact that the College as a whole was a highly successful public school, no more requiring public subvention than, say, Eton. It is only the charitable side that requires assistance and the assistance can be asked for with complete dignity as a right.

BABY SHOWS.

THE surest way to reach a mother's heart is through her child and commercial enterprise at Walthamstow has apparently not been slow to turn this knowledge to practical account, for we recently noticed in a morning contemporary the following paragraph: "A fat baby competition organised by a local firm of furniture dealers was one of the most popular holiday attractions at Walthamstow. Nearly 50 babies, all born in March, came to the scales which were erected in the firm's shop window. The winner tipped the beam at 16½ pounds. At the conclusion of the weighing prizes were awarded." Unfortunately, baby shows of this kind have a tragic as well as an amusing side, for the reason that they encourage the belief, which is far too generally entertained, even among the educated classes, that obesity in infants is synonymous with health. It is, however, a matter of clinical experience that a fat baby is unhealthy, with little resistance to disease, and likely to succumb on the least provocation to any of the so-called minor ailments of infancy. It is very greatly to be regretted that baby shows, if they are to be held at all, cannot be utilised for educating the laity to admire in babies those "points" which are genuinely deserving of admiration and expressive of a physiological condition, instead of acting, as they do, as direct inducements to over-feeding with foods which fatten but do not produce sound, healthy tissues. Some little time ago Mr. Rowntree in his admirable work entitled "Poverty" drew attention to the fact that the dietaries of a large proportion of the poorer classes were deficient in nitrogen-containing or proteid foods to a degree which was incompatible with the maintenance of a normal standard of health. Unfortunately, with few exceptions tissue-forming or proteid foods are expensive, while the nitrogen-free varieties such as the carbohydrates are comparatively cheap and hence there are economic reasons why the small wage-earner should, in the belief that he is laying out his money to the best advantage, provide himself and his family with foods which are quite unsuitable. The effect of this injudicious dieting is even more serious in the case of children than in the case of adult persons, for in addition to the necessity for the proteid elements of food for the repairing of tissue there is a necessity for them to satisfy the needs of growth. An examination of the dietaries of that considerable number of infants of the poorer classes who are artificially fed discloses the fact that while they are relatively starved as far as proteids and fats are concerned they are grossly overfed in respect of the carbohydrate elements, with the consequence that in addition to an unnecessarily large storage of glycogen and fat in such infants there is also a large predominance of physiologically unsound tissue approximating somewhat closely to the embryonic type, deficient in nitrogen and liable to undergo degenerative changes of the hyaline, mucoid, or carbohydrate type The appearance of these carbohydrate- or sugar-fed infants is highly characteristic. There is a curiously translucent and almost opalescent appearance of the tissues; they are hypertrophic square-headed infants and to the touch they are cold, gelatinous, and flabby, with none of the elasticity and tone which characterise the tissues of the vigorous, healthy, breast-fed infant It is these sugar-fed, gelatinous babies who receive the prizes at infant shows and are held up by their proud parents as paragons of vigorous babyhood. For this reason it is impossible to doubt the mischievous effect of fat baby shows such as that recently held at Walthamstow. Baby shows properly conducted, the prizes being awarded to those babies who manifested the largest number of really good "points" and the clearest evidence of careful management, would be a practical and fruitful means of educating the laity in the true principles of infant culture and at the same time would disabuse the minds of mothers of many of their misconceptions, and among others of their admiration for the hypertrophic pathological types which Raphael and others among the great masters have perpetuated on canvas as pleasing standards of vigorous babyhood to be copied and admired.

SIR ERNEST CASSEL'S GIFT FOR THE RELIEF OF OPHTHALMIA IN EGYPT.

Sir Ernest Cassel having given a large sum of money to the Egyptian Government for the relief of ophthalmia in Egypt it has been decided to send travelling dispensaries into the country for the relief of those sufferers who are unable to attend the already existing hospitals. There will be at first one of these dispensaries or ambulance hospitals which will have a couple of tents with beds for operation cases and for the more serious treatment of cases. This will travel about from place to, place under the direction of an ophthalmic surgeon who will have under him an Egyptian assistant surgeon. If the experiment is successful the number of dispensaries will be increased. [illegible] by the Egyptian G[illegible] the enterprise with [illegible] ophthalmic dispensaries in Egypt." Mr. MacCallan was formerly senior house surgeon at the Royal London Ophthalmic Hospital (Moorfields) and at the present time holds the post of chief clinical assistant at the hospital. He will leave for Egypt immediately and has clearly the necessary qualifications to start the quaint experiment upon a sound basis. But what will be regarded as a sufficient measure of success to justify the making of further experiments, and who is to judge what is a success and what is a failure?

PARALYSIS AGITANS.

A VALUABLE "symposium" on paralysis agitans appears in the *New York Medical Journal* of May 2nd, and among the contributors are Dr. Joseph Collins, Professor M. Allen Starr, and Dr. Bernard Sachs. The facts observed and collected cover a very extensive field and refer mainly to the etiology, pathology, and treatment of this affection in their latest developments. Dr. Collins states in his paper that among 50 cases recently under his care 34 were males and 16 were females or 68 per cent. and 32 per cent respectively. The average age at which the disease developed was 51 years. The youngest patient was 32 years of age and the oldest 72. He found paralysis agitans to be frequent among persons of Celtic descent and rare among the Hebrews. There was a history of neuropathic heredity in 13 of the cases or 26 per cent. and a history of paralysis agitans in the parents or uncles in six cases Syphilis and alcohol were conspicuous by their absence as etiological factors. Worry and anxiety were traceable in seven cases and injury was assigned as a cause in the same number of cases. Dr. Collins stated his belief that "paralysis agitans was a disease of early senility, occurring as the reward of virtue." Professor Starr stated that a hereditary predisposition to the disease was met with in about 4 or 5 per cent. of cases, but that anxiety and injury appeared to him to bear a distinct etiological relation to paralysis agitans. He had never seen a patient absolutely cured of and tuberculous parents often showed tendencies to bodily mal-development and mental instability. Syphilitic children were dull and torpid, whereas tuberculous children—those of tuberculous diathesis but as yet free from tuberculous infection—were precocious and hyper-excitable. Parental tuberculosis, therefore, had a definite specific effect upon the offspring. Professor Adami pointed out that by the application of the graphic and mathematical methods devised by Professor Karl Pearson[1] it was possible to estimate the "expectancy of life" of candidates for life assurance who though themselves free from tuberculosis were inheritors of a tuberculous diathesis. There were certain hereditary conditions such as albinism, sexdigitism, and colour-blindness which did not affect longevity, but, on the other hand, hæmophilia did. A recognised "bleeder" was a distinctly unsafe life and must be shunned by insurance companies, for at any moment a trivial accident was liable to lead to a fatal hæmorrhage. Professor Adami concluded by referring to cases of offspring showing extreme variation from the parental type or so-called "sports." Such "sports" tended to perpetuate themselves in subsequent generations, but they were deficient in vitality and length of life. They had a special liability to succumb to disease and hence such individuals were to be accepted with caution for life assurance.

THE METROPOLITAN WATER-SUPPLY.

THE Water Examiner has lately issued his report on the metropolitan water-supply for the month of April. During the time under review the Thames water at Hampton, Molesey, and Sunbury was in good condition from the third to the twenty-ninth days. On April 1st, 2nd, and 30th it was of indifferent quality and on the last of these days the intake of the Chelsea Waterworks Company was closed. It would have been of interest to have been told whether on the same day the Thames river water was taken by the East London Waterworks Company and, as usual, filtered without undergoing the preliminary process of sedimentation. A full analysis of such water might prove of more use than the whole of the rest of the Water Examiner's report put together. In connexion with the Thames supply of the East London Waterworks Company it is of interest to note that the daily average amount of water derived during the month of April from the Hanworth "springs" was no more than 605,000 gallons, which is much below the amount usually obtained. The height of the Thames river level varied from a point one foot four inches above to one seven inches below the average summer level. At Molesey the total rainfall during the month amounted to 1·76 inches. The average daily supply delivered from the Thames was 111,394,207 gallons, from the Lee 48,223,407 gallons, from "springs" and wells 41,626,330 gallons, and from the Hampstead and Highgate ponds 258,158 gallons. The total daily average was 201,502,102 gallons for a population estimated at 6,484,238 and this represents a daily consumption per head of 31·08 gallons. The companies which do not profess to give constant service to their customers are the Kent, the New River, the Southwark and Vauxhall, and the Lambeth, and these give a constant supply to 99·8, 96·6, 95·4, and 78·5 per cent. of their clients respectively. The proportions of brown tint observed in a two-foot tube varied from three to 24 degrees of the standard in use. The water of the West Middlesex Company exhibited the deepest average tint of brown. Of late the quality of the water supplied by this company has deteriorated in comparison with that distributed by some of the other metropolitan companies and it is time that the attention of the directors should be called to the matter. Dr. T. E. Thorpe, C.B., F.R.S., the chemist employed on behalf of the Local Government Board, reports that the one sample of the water supplied by each of the metropolitan companies on April 23rd was fully examined. The results of these analyses show that the relative amount of the organic impurity of these specimens may be numerically represented as follows: Kent, 8; New River, 17; Southwark and Vauxhall, 24; Lambeth, 30; East London, 34; Grand Junction, 40; Chelsea, 41; and West Middlesex, 46 The water supplied by the New River Company was, as usual, of very good quality and that supplied by the Kent Company was excellent but hard.

THE ELEVENTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

THE above-mentioned Congress will be held at Brussels from Sept. 2nd to 8th of the current year. The President is M. Beco, secretary-general to the Minister of Agriculture and chief of the Brussels Sanitary Department The general secretary is Dr. Putzeys, professor of the Faculty of Medicine of the University of Liège, whose address is No 1, Rue Forgeur, Liège. The hygiene division of the Congress is divided into seven sections—viz., (1) bacteriology; (2) the hygiene of foods, including chemistry and veterinary matters; (3) sanitary technology, including engineering and architecture with reference to hygiene; (4) the hygiene of trades and professions; (5) the hygiene of railways, shipping, and other methods of transport; (6) administrative hygiene, including the prevention of transmissible diseases, workmen's dwellings, and infantile hygiene; and (7) colonial hygiene The Belgian State railways give facilities and fares at reduced prices. Other information can be obtained from the general secretary, Dr. Putzeys.

THE NEW BUILDINGS OF THE GLASGOW ROYAL INFIRMARY.

THERE has been for some time under consideration a scheme for the reconstruction of the Royal Infirmary, Glasgow, but it appears from a correspondence just published that the efforts in this direction of the controlling body of the infirmary have not met with the approval of at least one section of the inhabitants of the city. In January, 1900, ten architects were invited to send in suggestions for the new buildings which were to be erected and Sir Rowand Anderson was appointed assessor. After careful examination that gentleman recommended one of the designs but a committee of the managers disregarded his verdict and chose certain plans which he had not even included among the first four. With regard to these proceedings the local Institute of Architects has been much exercised in mind. Its secretary wrote on its behalf to protest against the selection and has continued to protest until at last the committee has declined to discuss the matter further. Objection is taken by the institute to what is regarded as the unfairness of departing from the ruling of the assessor, since it may be assumed that there was an implied condition that his advice would be acted upon unless there were good reason to the contrary. It is maintained that the accepted plans are in many vital particulars inadequate and out of date and that the infirmary, if erected in pursuance of them, will not conform to the most modern standards of design in this class of building More than this, it is held that the plans adopted will result in the production of a structure dwarfing and irretrievably injuring the external appearance of the adjacent Cathedral. The institute has therefore requested that the whole of the designs should be submitted to one or more hospital experts before anything more is done and having, apparently, the courage of its convictions, has offered, if its contention is not supported, to defray the cost of such submission. For the committee it is stated that the plans now being followed are perfectly suitable ones and were in the first instance excluded by the assessor chiefly on account of his views as to the style of architecture and the general elevation, points upon which the managers consider themselves quite able to form an opinion. This may be a correct attitude to assume. We do not suggest that in cases of this kind the judgment of an assessor must be invariably deferred to. He is only a means to an end and if that end can be attained more satisfactorily in some other way there is no cause for complaint. We are, however, quite in accord with the Glasgow architects in desiring that the canons of art shall be respected so far as is practicable. Without further evidence on the merits of the case it is impossible for us to speak with certainty, but it seems to us that the answer which the institute has received is hardly convincing and we trust that the managers of the infirmary will see fit to allay the misgivings which the publication of their intentions must raise in the minds of many. It ought to be feasible to erect hospital buildings without sacrificing elegance to utility and where, as here, the appearance of one of our all too few public monuments is concerned some concession may appropriately be made to popular sentiment.

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[1] Philosophical Transactions, vols. 185, 186, and 187.

RAILWAYS AND THEIR SANITARY ACCOMMODATION.

A DECISION was given by Mr. Curtis Bennett on June 15th which will no doubt be followed by an appeal and the settlement of an important point of law in connexion with sanitary matters. The Metropolitan Railway Company, constructing sanitary works at their station at Finchley-road, contended that they had power to do so under their private Act of Parliament and such other Acts affecting railway companies without giving notice to the local sanitary authority and receiving its approval of the work to be done. On the other side, a summons having been taken out against the contractor employed, it was contended that by-laws of the London County Council had been infringed and that these applied to the premises occupied by the railway company as well as to those for which private individuals were responsible Mr. Curtis Bennett, after consulting the numerous Acts and sections bearing upon the matter, decided in favour of the complainants and inflicted a fine amounting, with costs, to £11 6*s*. That the matter is of importance may be gathered from an observation of the learned magistrate who said, in delivering his decision, that if the contention of the defendants was correct any insanitary place on a railway, even if it affected a whole neighbourhood, could only be dealt with by the costly process of indictment.

INSANITY AND RACIAL FECUNDITY.

AN interesting article on insanity in relation to racial fecundity is contributed by Dr. John Macpherson, Commissioner in Lunacy for Scotland, to the issue of the *Edinburgh Medical Journal* for May. The article is based mainly on a study of the vital statistics of Ireland considered in reference to the decrease of the population and the increase of insanity in that country, but the general conclusions reached are, adds Dr. Macpherson, applicable also to England and Scotland. The increase of insanity in Ireland during the past half-century is undoubted The proportion of lunatics and idiots under the official cognisance of the Inspectors in Lunacy in Ireland in 1851 was 1 to 657 of the population, in 1861 it was 1 to 411, and in 1871 it was 1 to 328. Since then the proportion of the insane to the rest of the population has continued steadily to rise, the figures being 1 to 281 in 1881, 1 to 222 in 1891, and 1 to 178 in 1901. The actual numbers of all lunatic and idiots under official cognisance in Ireland were 23,187 in 1881, 36,133 in 1891, and 44,884 in 1901, while the population for the corresponding years has been 5,174,800, 4,704,700, and 4,453,600 respectively. This steady decrease in the population is due, as Dr. Macpherson points out, to emigration. Thus, during the 20 years ending March 31st, 1901, 1,199,100 persons of both sexes emigrated from Ireland, the number of female emigrants very slightly exceeding that of the males. That with a diminishing population there should occur an absolute as well as a relative increase in the number of insane persons is, adds Dr. Macpherson, a very striking phenomenon. The depletion of the population by emigration chiefly affects its sexually efficient units—persons of both sexes between the ages of 15 and 55 years, since the vast majority of the emigrants are young adults or persons below the age of 55 years. One result of this depletion is, argues Dr. Macpherson, that the marriage-rate is lowered in the country thus depleted of its marriageable young adults. From a careful comparison of the official statistics of emigration and of marriage as regards the various counties of Ireland the broad conclusion is reached that "the prominent factor in the vital statistics of Ireland is the association of emigration with a declining marriage-rate." Dr. Macpherson then proceeds to point out that there is a correlation between "maximum fertility," or fecundity, and the "normal healthy racial type." The emigration of so many units of the latter tends to leave behind a less fertile stock, for it is the artisan and working classes which possess the maximum of fertility and which constitute the main body of emigrants. It is further shown from a study and comparison of various statistics on fertility and on the liability to disease of large communities that a high degree of fertility is, in accordance with general biological laws, accompanied by a low ratio of morbidity (liability to disease including mental disease) The depletion of the more fertile stock tends to leave behind a less fertile stock which, however, is more prone to develop insanity as it is to suffer from other diseases. Hence the increase of insanity is more rapid absolutely in Ireland than in England or in Scotland where the effects of emigration are less felt. Dr. Macpherson concludes that this general biological law does not, of course, exclude other factors in the production of insanity—factors which are as applicable to the rest of the United Kingdom as to Ireland itself.

EMBLEMS OF THE MEDICAL PROFESSION IN JAPAN.

THE June number of *Man*, a journal published under the direction of the Anthropological Institute of Great Britain and Ireland, contains an article by Mr. E. S. Hartland, F.S A., on two Japanese *boku-to*, or emblems of the medical profession. These objects, of which photographic representations are given, were wooden swords worn by medical practitioners in Japan before the revolution of the last century which displaced so many of the old customs of the country. A man of rank was formerly entitled in Japan, as elsewhere, to wear a sword; indeed, in Japan he was entitled to wear two swords. The retainers of a Daimio or feudal lord also wore swords. The medical men's swords were generally of a somewhat fanciful description and were made in many forms; some contained lancets, others contained knives for cutting herbs, but the majority were quite plain. One of the objects now described and figured is in the shape of a large bean-pod. Its bean like curvature approximates to that of a Japanese sword. It is 44 centimetres (17½ inches) in length and of a nearly uniform circumference of 11 centimetres or thereabouts It is made of some fairly hard wood which takes a polish and it is carved to indicate seven seeds inside Wrapped around it is a silken cord by which it was attached to the girdle. Together with this cord it weighs six and three-quarter ounces avoirdupois On the side there are represented in lacquer a grasshopper and another large insect. On the other side are similarly represented a wasp, a small fly somewhat like the common house fly, and apparently a small beetle. The other *boku-to* is more interesting. It is a rough piece of willow, 45 centimetres long and broader at the bottom than the top. Japanese characters meaning *Spider-boat* have been deeply cut upon it. At a distance of nine centimetres from the top it is pierced with a hole three and a half centimetres long which has been utilised to attach a flat cord or tape and toggle for convenience of holding it in the girdle. The cord is of a pale red colour, now a little faded. The *boku-to*, cord, and toggle weigh together under four and a half ounces avoirdupois. The two specimens now described were bought at Atami in Japan a few months ago.

"OPTICIANS" AND SPECTACLE PRESCRIBING.

WE have received two long letters from Mr. J. Aitchison and Mr. L. Laurance as rejoinders to our leading article upon their former communications which appeared in THE LANCET of June 6th, p. 1617. We thought it fair and courteous to give these gentlemen a hearing on that occasion, but we see no reason for permitting them to continue a controversy on which, in our opinion, there is nothing new to be said. The simple facts are that the eyes are organs in which mere faults of shape and alterations of function incidental to advancing life are frequently complicated by physiological defects and pathological changes of a serious character. The knowledge of the medical practitioner covers the whole range of the resulting phenomena; the knowledge of the "optician" at the very best covers only a small and comparatively unimportant portion of them. In these circumstances the claim of the "optician" to be a skilled adviser in matters appertaining to vision appears to us not only to be one which it is impossible to sustain, but one which cannot fail in a certain, and perhaps considerable, proportion of cases to entail disaster upon those who are misled by it. The action of the prescribing "optician" is precisely on all fours with that of the prescribing druggist. If it be the pleasure of the public to be deceived the public must suffer, and in the meanwhile we have discharged our duty by giving expression to the facts of the case.

THE NEW UNIVERSITY OF LONDON.

Sir Arthur W. Rücker, Principal of the University of London, in the course of his remarks on the occasion of the distribution of prizes at St. Thomas's Hospital Medical School on June 11th, observed that the growing closeness of the relations between the great medical schools and the University of London should be emphasised as far as possible. In the reorganised University of London they possessed machinery of the most extraordinary flexibility, though the actual government of the University was really very complicated because the democratic nature of its organisation rendered it necessary that an enormous number of people should be consulted. All the medical schools connected with the University of London had a share and voice in determining the way in which the subjects in which they were interested were taught. The University could single out one teacher in an institution in London and recognise him and him alone, or it might, as University College hoped it would, take over the entire control of an institution as a whole. In broad terms, the relation of the great medical schools to the University would be something like the relation that existed between the colleges of Oxford and Cambridge to those universities. They would be absolutely independent but would be represented on the governing body of the University and in that manner would help to formulate the conditions under which diplomas would be granted. One of the principal features of the University of London would be that it would become a great centre for post-graduate work. Within the last year the University had held out its hand to the graduates of other universities in a way it had never done before. The University of London had entered into the fraternity of learning and would make it as easy as possible for those people who had passed competent tests elsewhere to make such use as they pleased of the University. The new plan only came into operation on Oct. 1st last and there were already on the books of the University 206 graduates of other universities who in such a short space of time had taken advantage of the new door that had been opened to them. Of those among that number who had entered as internal students only two or three were going in for medicine and Sir Arthur Rücker wished to point out that a graduate from another university desiring to finish his medical education in the University of London derived certain advantages if he entered as an internal student. He had the privilege, provided that he produced the proper certificates, of being able to cut down his time from five years to three. In some of the great medical schools the authorities believed that they should be relieved of the burden of teaching such subjects as chemistry, physics, and physiology which could be taught at a distance from a hospital. The Senate of the University of London had approved of a plan sent up by the Faculty of Medicine for the establishment of an institution where those subjects could be taught and if the funds could be found a site could be obtained close to the University of London.

SOME INTERESTING FACTS REGARDING THE PURIFYING EFFECT ON THE AIR OF THE RECENT RAIN.

WE have often pointed out that the passage of raindrops through the air not only purifies the air but imparts a freshening effect to it, due possibly to an oxidising action and perhaps to the formation of peroxide of hydrogen. Everyone is familiar with the "clean" smell of the air after a rainstorm. According to this view the air of the county of London must have sustained a very thorough scouring during the remarkably continuous rainfall which began on Saturday, June 13th. There was very little movement in the air and an opportunity was thus afforded of collecting the water for analysis, the results of which would represent some at any rate of the impurities washed out of the air immediately over this area. The following were the results obtained with raindrops caught in the neighbourhood of the Strand on Monday, June 15th:—

	Grains per gallon
Total solid matters	9·100
Common salt	0·800
Ammonium sulphate	0·652
Organic ammonia	0·011
Soot and suspended matters	5·000
Nitrates	None.
Nitrites	Very distinct.

The amount of ammonia in the form of sulphate is remarkable and, of course, its chief origin is the combustion of coal. The nitrites with traces of ammonia are due to electrical discharge in the atmosphere. These results when worked out with the total rainfall give some remarkable figures. Taking the rainfall as 3·8 inches in five days (though a higher figure than that has been returned by some observers) we arrive at the calculation, based on each inch representing 22,622 gallons of water falling upon one acre and the London county acreage as 74,839, that no less than 6,437,229,860 gallons of water were poured over this area. And according to the above results of the analysis of the rain-water this enormous volume represents the washing out of no less than 3738 tons of solid impurities, of which 330 tons consisted of common salt, 267 tons of sulphate of ammonia, and 2000 tons of soot and suspended matters. Regarding the combustion of one ton of coal to produce 20 pounds of ammonium sulphate (a very fair average) the quantity of coal represented by the ammonium sulphate washed out by the storm would be 29,904 tons. It need hardly be added that the purification is not only, as is here shown, mechanical, physical, and chemical, but bacteriological also.

THE DISTRIBUTION OF PLAGUE.

As regards Hong-Kong, a telegram from the Governor received at the Colonial Office on June 11th states that for the week ending June 6th there were 136 cases of plague, of which 4 occurred in Europeans. During the same period there were 94 deaths from the disease. As regards the Mauritius, a telegram from the Governor received at the Colonial Office on June 12th states that for the week ending June 11th there were 2 fatal cases of plague.

CHILDREN UNDER THE POOR-LAW.

DURING the course of a discussion on a vote for the Local Government Board which took place in Committee of Supply on June 11th several Members of the House of Commons expressed their views as to the best manner of dealing with pauper children. The general effect was the familiar one of darkening counsel and Mr. T. W. Russell's conclusion that the problem could only be settled by using all the methods—schools of moderate size, village communities, boarding out, and scattered homes—may be taken as summing up all that the debate had of value. As to the desirability of getting the children out of the workhouse there is no dispute; it is chiefly in regard to the relative merits of boarding out and of erecting schools that differences of opinion arise. For boarding out there is much to be said. Since the children are scattered there is little risk of their being involved in epidemics, especially of ophthalmia, such as are common in the schools. School life is wearisome, because as the children have no other homes there are not for them those breaks in the monotony which holidays supply. Moreover, the conditions are so different from those of ordinary life that the children leave the institutions with little conception of how to spend to the best advantage their limited earnings and, in the case of girls, without any aptitude for domestic service, which is practically the only opening for them. In these respects the boarding-out system is much more satisfactory and there is the further consideration that on leaving a home the child is usually able to maintain friendly relations with the foster-parents and has, therefore, a place of resort in emergencies, while it is possible for anyone who has come to be interested in the child's welfare to exercise some degree of control over him or her for years afterwards. One of the most successful centres for boarding out has been that of Calverton (Bucks) authorised in 1871. Here the Rev. W. P. Trevelyan has devoted himself to the care of the children with the result that of 92 boys and 112 girls who have passed through his hands during 31 years only five have been lost sight of, while the great majority have been converted into useful members of society. The schools, however, have their value. Experience has shown the difficulty of properly supervising the children boarded out and in the case of those who are mentally deficient and consequ [illegible] troublesome several instances of cruel treatment [illegible] recorded. Again, boarding out is hardly practicable e [illegible] with orphan or deserted children owing to the risk of [illegible]ference from relatives. On June 12th and 13th, at the Church House, Westminster, representatives of the various London Poor-law schools gave a series of gymnastic displays arranged by two of the organisers of the London School Board. The children seemed to be happy and healthy and their dress and bearing reflected credit upon those in charge of them. On the first day Mr. Grant Lawson presided and quoted certain figures to show that the schools were doing good work. He mentioned that of 3187 girls traced only 262 were reported by their mistresses to be unfit for their duties, while of 1275 boys only 43 had been described as unsatisfactory. The position is therefore not one of rivalry between two systems and the matter at issue is merely the selection of suitable cases to be dealt with under each.

THE Workhouse Nursing Association will hold a conference at 10, Great George-street, Westminster, London, S.W., on Monday, June 29th, at 3 P.M., to discuss the report of the Departmental Committee on Nursing appointed by the President of the Local Government Board. The Right Hon. J. G. Talbot, M.P., will preside.

THE Cavendish Lecture of the West London Medico-Chirurgical Society will be delivered on Friday, June 26th, in the town hall, Hammersmith, at 8.30 P.M., by Professor T. Clifford Allbutt, the subject being *Disease* of the Ascending Aorta, and not Atheroma as previously announced.

THE autumn congress of the Sanitary Institute will be held at Bradford from July 7th to 11th inclusive. Information can be obtained from the secretary, Mr. E. White Wallis, the Sanitary Institute, Margaret-street, London, W.

VISIT OF THE KING AND QUEEN TO THE LONDON HOSPITAL.

HIS MAJESTY THE KING, accompanied by Her Majesty Queen Alexandra, visited the London Hospital on June 11th on the occasion of the opening of the new out-patients' department by the King. Their Majesties were received at the vestibule of the building by the President of the hospital, the Duke of Cambridge; the chairman of the hospital, the Hon. Sydney Holland; the senior physician, Dr. Stephen Mackenzie; the senior surgeon, Mr. C. W. Mansell Moullin; and Sir Frederick Treves, consulting surgeon. Their Majesties were then conducted to the reception room where they were presented with an address from the mayor, aldermen, and councillors of the borough of Stepney, and [illegible] accepted the King and Queen [illegible] ut-patients where [illegible] On the entrance [illegible] entor called upon those present for cheers for their Majesties, which was heartily responded to. After the King and Queen had been conducted to a raised and decorated platform the first verse of the National Anthem was sung and then prayers were offered by the Bishop of London and the company sang the hymn, "O God, our help in ages past." The Duke of Cambridge, attended by [illegible] welcomed their Majesties to the [illegible] Iolland, accompanied by M [illegible] iced and presented the add [illegible] agement which was read by [illegible] ckenzie, accompanied by hi [illegible] ves and Mr. Mansell Moullin, next came forward and presented the following address which was read by Dr. Mackenzie:—

> May it please Your Maje [illegible] connecting the consulting staff, Mr. Ma [illegible] I as senior physician, speaking [illegible]

His Majesty then received his reply from Mr. Akers-Douglas, M.P., and read it in a clear voice so that every word was heard by those present. He referred to the satisfaction of the Queen that the Finsen light cure for lupus had been introduced into this country. He thanked the anonymous donor for the £25,000 towards the cost of the new building. His Majesty then said that before declaring the building open he wished to record his deep feeling of gratitude to the London Hospital which at the time of his severe illness provided him "with so distinguished a surgeon as Sir Frederick Treves, with an anæsthetist in Dr. Hewitt, and with two such nurses, Nurse Haines and Nurse Tarr, whose unceasing attention" he could not sufficiently praise.

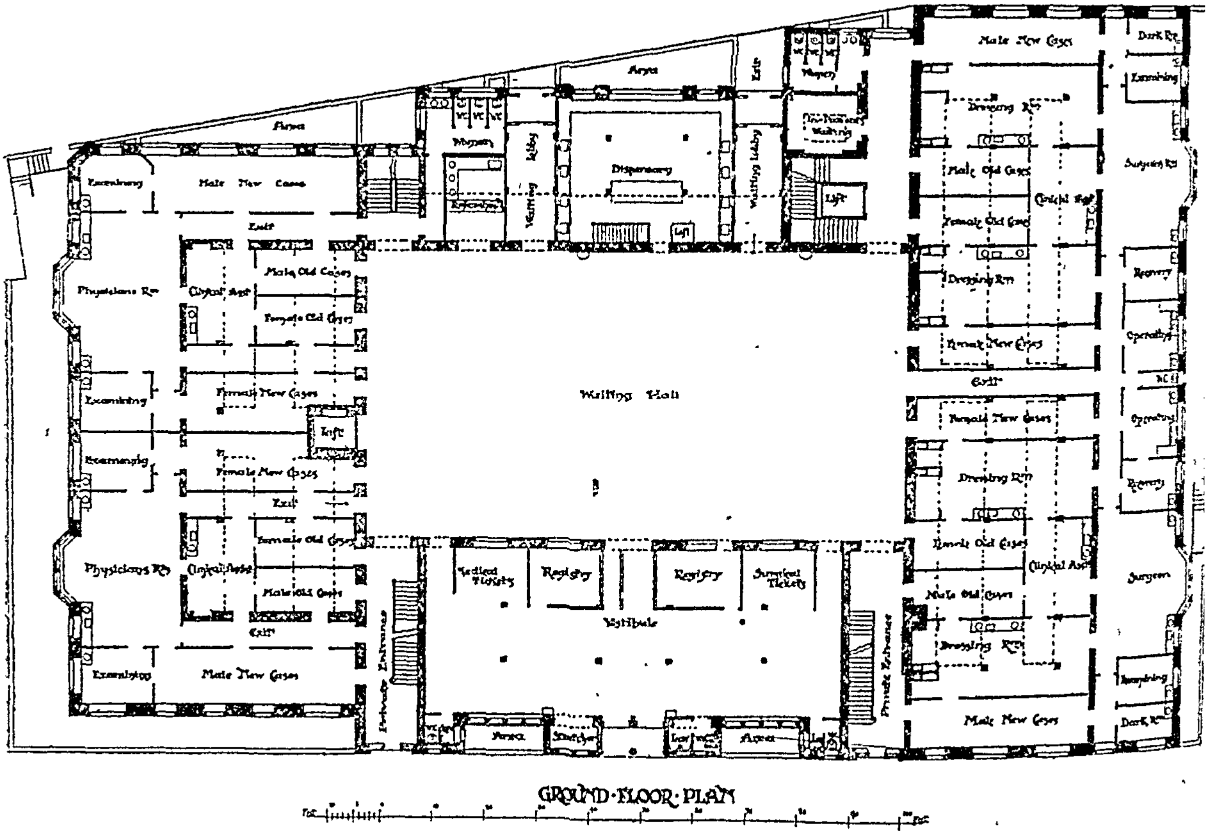
The King and Queen then proceeded on a tour of inspection through the x-ray, the electro-therapeutic, the lupus, the ophthalmic, and the aural departments. In the course of their progress the Queen pinned badges upon the breasts of 15 nurses who had proceeded to the war in South Africa from the London Hospital. During this ceremony Her Majesty said that she was confident when she sent the nurses out to the war that they would do honour to the training they had received from Miss Lückes at the hospital. In the x-ray department their Majesties spent some time and after they had had their hands radiographed the apartment was darkened and Dr. R. Morton exhibited an atom of radium which sent its rays through several penny-pieces. In the department for the treatment of lupus by the Finsen light the Queen went through the ceremony of declaring the rooms open and hoped that all the patients who left would be cured and would "give a blessing to her great countryman, Professor Finsen, who through hard work and perseverance had made that wonderful discovery." Much attention was paid by their Majesties to the case of a patient who had travelled from Turkey and after a year's treatment was nearly cured. In the ophthalmic department a patient with colour-blindness attracted the notice of the King and Queen and their Majesties were shown cases of cataract. In the aural department the Royal visitors were shown three girls, triplets, who were born deaf and dumb but whose speech and hearing had been restored to them. Some little time was spent in this part of the tour of inspection and their Majesties did not proceed on their journey until the method of examining the tympanum had been demonstrated to them and they had themselves looked down an aural speculum. Their Majesties then returned to the vestibule, passing through the operating theatres on their way, where a Crimean veteran who was awaiting surgical treatment was recognised by one of the King's suite and the Royal party delayed their departure to say a few kindly words to the sufferer. The King and Queen then left the hospital amid loud cheers and proceeded on their way to the Mansion House to take tea with the Lord Mayor and Lady Mayoress.

We append a few particulars of the new out-patients' department.

The building is entered from Oxford-street through a large vestibu
capable of seating 200 patients, in which are the registration and tick
offic l cases receive th
ticke pacious waiting h
havi At the east end
the rooms forming
surg geon's room, clini
assistant's room, an operating room with a recovery room adjoini
two examining rooms, and in both male and female sides there
waiting rooms for old and new cases with separate surgical dress
rooms. At the west end is situated the medical department. This
also two suites of rooms and each consists of physician's room, clini
assistant's room, two examining rooms, and waiting rooms for both
and new cases for each sex. A refreshment bar is attached to
waiting hall for the sale to the patients of light refreshments
nominal prices. Drinking fountains are provided both in waiting h
and vestibule.

The general arrangement of the plan of the building insures th
the patients after entering at Oxford-street are sorted and the
proceed through the department in which their case is dealt with, an
after obtaining their medicine leave by the exits into Green-stre
without crossing the progress of other patients. This arrangeme
naturally facilitates the management of the great numbers whic
have to be dealt with by the officials. There are two priva
entrances from the street for the use of the staff and the official
This out-patients' department is connected with the west wing
the hospital by means of a subway which is constructed und
Turner-street. On the first floor are situated the aural, dent
obstetric and massage departments, each of which is comple
in itself, having the necessary consulting, operating, and waitin
rooms. The second floor is devoted to the ophthalmic, photograph
and electrical departments. The lupus department is also on this flo
and contains the Finsen lamp which Her Majesty presented to th
hospital together with several other lamps. There are separate roo
for the surgical dressing of wounds, medical officers, and nurses. T
motor-generators and other apparatus for the transforming of the electr
current to supply this department are situated in a room on the ro
above. The basement contains a large laboratory department, full
equipped for the manufacture of medicine, pills, lozenges, and sod
water, and has large stores for drugs, dressings, and other necessar
for medical and surgical treatment. The bath department consists
medicated and Turkish baths with the necessary dressing and waitin
rooms, and is also in the basement together with the boilers, isolatio
rooms and accommodation for students, dispensers, porters, and othe
officials

The whole building is of fire-proof construction and the floo



Ground floor plan of new out-patient buildings at the London Hospital.

throughout are finished [illegible] glazed with either glaz[illegible] with sirapite plaster. T[illegible] are fitted with sinks, [illegible] the various purposes. T[illegible] [illegible] artificial stone dressings. [illegible] have been carried out in accordanc[illegible] chairman and house committee of t[illegible] been taken up in elaborating the [illegible] medical and surgical staff. The [illegible] designs at [illegible] and Plumbe, F.R.I.B.A [illegible] opening day; Mr. Henr[illegible] Mr. William Shepherd [illegible] the works.

THE ANNUAL DINNER OF THE INDIAN MEDICAL SERVICE.

THIS dinner took place at the Café Monico on June 11th, Surgeon-General Sir JOSEPH FAYRER, Bart., K.C.S.I., F.R.S., occupying the chair, in the absence of Surgeon-General Sir Annesley De Renzy, K.C.B., who through domestic affliction was prevented from presiding.

After the usual toasts had been given from the chair and had been duly honoured Sir JOSEPH FAYRER proposed "The Indian Medical Service." He observed that on a previous occasion he had given a brief *résumé* of the work of some of the most distinguished medical officers belonging to the service, men whose names are and ever will be associated with its greatness as exemplars of all that has raised it to its present position. He thought that they had good reason for maintaining confidence in the prospects of the service and [illegible] pirit of scientific research was [illegible] He coupled with the toast the [illegible] K.C.S.I., and Surgeon-General A. Scott Reid.

Sir WILLIAM HOOPER having briefly replied,

Surgeon-General REID, after some humorous remarks, said he wished to speak on certain causes of dissatisfaction which existed in the Indian Medical Service and he would only refer to those which had been in operation since he entered the service, that is to say, during the last 31 years. He would first take up those which principally affected the military side. The first source of discontent was, he thought, the amalgamation, in 1880, of the military medical administration. He did not deny that this change might have been inevitable and to the advantage of the State, but it certainly was not popular with the Indian Medical Service. The immediate effect of the change was, of course, to diminish the number of administrative appointments and to throw back the average length of service for promotion to that grade by at least three years, thus practically cutting off all men who entered the department after the age of 25 years from any hope of attaining such an altitude. But it did more than that—it threw all medical officers in military employ out of touch with the head of their service who ceased to have more personal or official relations with them than the Mad Mullah of Somaliland. It was true that the order effecting the measure did not positively exclude the Indian Medical Service from the highest appointment, but Surgeon-General Reid thought he would be a bold and over-sanguine Indian medical officer who hoped ever to become Principal Medical Officer of His Majesty's forces in India. The blow was softened to some extent by conferring on sanitary commissioners of provinces the pay and status of administrative officers, but this privilege was in time withdrawn and in its turn partly compensated by the grant of four extra £100 retiring pensions, a concession which had, however, for some years been abolished for those entering the service. Surgeon-General Reid added that having said so much he must guard himself against the suspicion of any unfriendly feelings towards their sister service. He had many friends in it and his three staff officers belonged to the Royal Army Medical Corps. He could not be served by better. The matter was a purely impersonal one. A further cause of dissatisfaction was the want of suitable appointments for senior medical officers. As far as he could see the introduction of the station hospital system was the only remedy, but when he said this he freely admitted that if put to the vote the majority of officers in the service would go against it—and why? Simply because the majority were young. The introduction of the station hospital system would, in his opinion, be greatly to the advantage of the service and would undoubtedly establish a considerable asset of economy and efficiency in the accounts of the State. A cause of disappointment among young medical officers of the Indian Medical Service was the backward condition of hospitals for native troops. There had been some improvement since he entered the service but not in keeping with the advance in civil hospitals. Their equipment was meagre and the resources for treating disease were very crude. Of skilled nursing there was none and the range of dieting was very limited. Finally, as regarded the military side, he referred to the frequent transfers among junior officers. This was a very acute evil and he supposed could only be remedied by increase of establishment. He knew of several who for the first year or two had had as many moves as months and who during that period had had no opportunity of studying for, or passing in, the lower standard examination. This was hard on them. They were put to endless expense and for the time remained ineligible for charge pay. In his opinion an officer of the Indian Medical Service on arrival should be left undisturbed at the headquarters of his district until he had had a fair opportunity—say, for six months—of qualifying in the vernacular and he should draw the pay of any charge in which, owing to the exigencies of the service, he might be placed during that period. Surgeon-General Reid said he would turn next to the civil side. Although the Indian Medical Service was considered to be primarily a military one and the services of its members were only lent to the civil department, there was no doubt that in former times at least employment in the latter formed the main attraction and object of ambition to candidates. This factor was, however, he feared, not such a powerful one now, for during his tour as administrative medical officer of the Central Provinces several civil surgeons there, and some of them permanent, returned to military employ of their own accord, while since going to the Punjab command as principal medical officer about the same number who had registered their names for civil employment refused the chance when it was offered to them. He presumed that they considered that any slight advantage they might gain with regard to pay would be more than counterbalanced by having to serve in small and remote stations with little prospect of bettering themselves. Another cause—but here he feared he was skating on thin ice—which had rendered civil employment less popular lay in the restrictions which the Government had been pleased to place on the acceptance of fees for professional services rendered to chiefs, native noblemen, and men of position. From the days of Clive, when the channels for the augmentation of official incomes were closed to other Government servants, whose pay was, however, raised to com[illegible] As far as he knew the privilege had never been abused. Finally, viewing the service as a whole he considered that the pay throughout and some of the positions required recasting if they were to retain the class of men who formerly entered its ranks. To begin at the top, he was of opinion that the Director-General should have the rank (as in the Royal Army Medical Corps) and the pay of a lieutenant-general; also that he should be a secretary to the Government of Indi[illegible] Member of Council. It [illegible] head of an important [illegible] obliged to submit his proposals through, and subject them to the criticism of, men of perhaps two-thirds of his length of service and not that proportion of special knowledge of the subject that was being dealt with. His pay at present was only that of a second-class commissioner of a division and their late Director-General, Robert Harvey, than whom the Government of India never had a more loyal servant, or the department a truer friend, had told him that but for his private income he could not properly have supported the position. Surgeon-General Reid conceived that the head of their service should be able to hold his own socially among others in analogous appointments and, above all, that he should be enabled to receive and to entertain all the members of his own service who called on him. In this way—he was thinking more of the young men—the Director-General would have a greater opportunity than through other channels of forming their acquaintance, of gaining their confidence, of gauging their characters, and of encouraging and stimulating them in their careers. Similarly, with regard to inspector-generals of civil hospitals, they too ought to be secretaries and members of the provincial council. Surgeon-General Reid concluded his speech by referring to the paucity of honours and rewards given in recognition of distinguished but purely professional work.

The toast of "The Visitors" was proposed by Lieutenant-Colonel A. CROMBIE, C.B., and responded to by Sir WILLIAM S. CHURCH.

The evening concluded with an acknowledgment of the services of Lieutenant-Colonel P. J. Freyer who acted as secretary of the dinner and who, in acknowledging the compliment, referred to their loss by death of Surgeon-General W. R. Rice, and the absence of Dr. W. S. Playfair who presided on the last occasion.

The following members were present:—

Surgeon-Generals: G. Bainbridge, W. W. Beatson, Sir J. Fayrer, Bart., K.C.S.I., F.R.S., Sir W. R. Hooper, K.C.S.I., A. Scott Reid, C. Sibthorpe, C.B., and P. W. Sutherland.

Colonels: G. H. Banks, W. E. Cates, H. Cayley, C.M.G., D. Hughes, B. Williamson, and W. S. G. Wynne.

Lieutenant-Colonels: M. L. Bartholomeusz, G. H. Bull, A. Crombie, C.B., H. H. Dimmock, J. Duke, A. Duncan, P. J. Freyer, G. S. Griffiths, P. de H. Haig, W. H. Henderson, J. Lewtas, J. B. Lyon, C.I.E., D. P. MacDonald, D. Ff. Mullen, J. O'Brien, J. Parker, G. S. Sutherland, W. H. Thornhill, J. F. Tuohy, A. H. Williams, and E. W. Young.

Majors: E. H. Brown, W. J. Buchanan, W. S. Caldwell, P. Carr-White, B. B. Grayfoot, A. G. Hendley, H. Hendley, J. G. Hojel, J. Jackson, M. A. Ker, C. H. L. Meyer, L. Rogers, and B. J. Singh.

Captains: H. Boulton, S. H. Burnett, A. W. F. King, W. Murphy, J. Penny, A. E. Hayward Pinch, E. R. Rost, and W. B. Turnbull.

The guests were: Sir William S. Church, Bart., K.C.B., President of the Royal College of Physicians of London; Sir James Dick, K.C.B., R.N.; Surgeon-General Sir William Taylor, K.C.B., Director-General A.M.D.; Professor T. Clifford Allbutt, F.R.S.; Surgeon-General T. Walsh, A.M.D.; Mr. A. Willett, President of the Royal Medical and Chirurgical Society; Mr. Howard Marsh; Professor R. C. Leith; Dr. Dawson Williams; and Mr. Thomas Wakley, jun.

ARMY MEDICAL DEPARTMENT REPORT FOR 1901.

CONCLUDING NOTICE.[1]

IN turning over the leaves of a volume consisting altogether of 427 closely printed pages of text and tables it is impossible to do more than to select some of the more salient points for observation and to allude briefly to a few subjects which present themselves for notice. Colonel W. J. Charlton, R.A.M.C., the principal medical officer at Netley, states that the whole of the hospital drainage system was undergoing reconstruction. The flushing of the water-closets is defective, due to the action of the chlorinated water of the Hermite system. Although a useful agent for cleansing purposes its action on the metal fittings of the water-closets is destructive and may probably necessitate the provision of new fixtures. No over-crowding occurred during the year. Extra accommodation was provided in 34 Dœcker huts, each having a cubic space of 8298 cubic feet and accommodation for 10 men. The total number of invalids from abroad amounted to 6132, of whom 2851 were invalids from South Africa and 3281 from other stations abroad. Of the latter 29 died, 112 were discharged to duty, and 576 were invalided from the service. Of the South African invalids, 60 died during the year, but the full statistics of these invalids are reserved for inclusion in the campaign records.

The Principal Medical Officer, Aldershot (Colonel J. L. Notter, R.A.M.C.), remarks with reference to the establishment of systematic ophthalmic work how very important it is in these days of long ranges and modern trajectory that this should form a special branch of hospital duty, the systematic examination of the eye and the selection of lenses "when required" being more than ever necessary in the army.

At Gibraltar it is reported that considerable progress is being made with the new military hospital which is being erected there. The building is much required and must, we presume, be nearly, if not quite, completed by now (1903)

Among the sanitary changes at Bermuda it is noted that where the dry-earth system of latrines has been replaced by a water-carriage system the health of the troops has improved. As we have said in previous notices of these reports Bermuda offers, in our opinion, many facilities for carrying out an effective sewerage system and of thereby lessening, if not altogether abolishing, its liability to outbreaks of enteric fever in the future.

Passing on to the section dealing with the health of the European army serving in India we find that the average strength of these troops was much less in 1901 than it was during the preceding ten years. This was owing to the non-replacement of the troops sent to South Africa in 1899. The following table shows the admission, death, invaliding, and constantly sick ratios amongst the troops during the year 1901.

Average strength.	Ratios per 1000 of strength.				
	Admissions.	Deaths.	Invalids sent home.	Invalids finally discharged.	Constantly sick.
60,838	1104·3	13·12	39 28	8 60	66 90

The health of the troops was exceptionally good, the admission ratio was lower than that for any of the preceding 20 years, and not since 1883 have the death and constantly sick rates been less.

Enteric fever showed a decrease in 1901 of 10·8 in the admission ratio and of 2·95 in the death-rate as compared with the decennial average rates. The disease caused 26 82 per cent. of the deaths from all causes in the command in 1901 as compared with 32·65 per cent. in 1900 The satisfactory decrease in the prevalence and mortality of this fever which took place in 1899 and 1900 was maintained in 1901. The admission rate had not been so low since 1887 and the death-rate was less than it has been in any year since 1884. Whether this improvement will be maintained when the ordinary system of relief has become thoroughly re-established remains to be seen It is in the meanwhile noteworthy that although the admission rate amongst the men in their first year of service in India has remained about the same there has been a decided decrease amongst the men in their second year of service, and, indeed, all the different age periods This would indicate that some other causes besides age and acclimatisation or mere survival of the fittest must have been at work. In the case of officers we find that the admission ratio for enteric fever in 1901 was 17·8 per 1000, against 21·9 in the previous year, and as compared with an admission ratio of 12·8 per 1000 amongst the warrant officers, non-commissioned officers and men during the year under report. The percentage of mortality to attack was 28·12, as compared with 23·07 in 1900, and with 26·03 amongst the warrant officers, non-commissioned officers, and men during 1901. The cases were distributed over 20 stations.

Under the heading of surgical operations we find that the total number of these recorded among the British troops serving in India for the year was 687 and of deaths following operation 78. Of the 143 operations on the abdomen it is noted that 98 were for abscess of the liver.

It seems worth while mentioning that in the report on Egypt and Cyprus it is noted that during the year the open-air treatment of tuberculous disease was introduced at the station hospital, Cairo. The Egyptian climate and the fine situation of the citadel would naturally lend themselves to the purpose and the medical officer in charge reports highly of the favourable results that have been obtained and in many of the cases of the relatively rapid relief and improvement that have followed on the adoption of continuous open-air life and treatment.

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[1] The previous notice was published in THE LANCET of June 6th, 1903, p. 1609.

The first paper in the appendix is Major R. H. Firth's Report on the Progress of Hygiene for the year 1901–02, and to this we would call particular attention, because it strikes us as a really useful and interesting *précis* of all that has been known and done up to date, accompanied by a running commentary from the pen of the Professor of Military Hygiene at Netley which adds considerably to its value. It would simply be tedious to enumerate all the subjects passed in review by Major Firth. The paper should be read *in extenso*. Those portions of it dealing with scarlet fever, the influence of hospital isolation, and the bacteriology of that disease, the remarks regarding the recent recrudescence of small-pox and the bacteriology and efficacy of vaccine, and more especially those portions of the report dealing with the enteric fever problem and the recent advances made in our knowledge regarding the transmission and prevention of yellow fever, will well repay perusal. The report on the work done in the surgical division of the Royal Victoria Hospital, Netley, in the year 1901–02, by the professor and assistant professor of military surgery will be referred to with interest. Considerably more than 400 operations have been performed during the year, which is a great increase over the numbers of any previous year. The increase is due almost entirely to cases of gunshot wounds from South Africa (the report is illustrated by some excellent stereoscopic skiagraphs) and to operations for the radical cure of hernia. With regard to South Africa, we may, however, very well await the anticipated appearance of an official report of the Medical and Surgical History of the War. We notice that 13 cases of abscess of the liver were operated on during the year; of these only four recovered and nine died. One of these patients was moribund on arrival at Netley; he was operated on and died on the day of arrival. Of the cases, five gave a definite history of dysentery, in four no cause could be ascribed, in two the abscess followed enteric fever, in one debility, and in one Mediterranean fever. In five of the fatal cases the relatives would not allow a post-mortem examination; details are given of the remaining four.

The report on the Medical History of the Campaign, China Field Force, 1900–01, which concludes the papers in the appendix, is mainly of interest to military medical officers.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on June 11th, the President, Sir HENRY G. HOWSE, being in the chair.

Diplomas of Fellowship were issued to 30 successful candidates.

A recommendation from the Board of Examiners in Dental Surgery was adopted. It was to the effect that candidates for the Licence in Dental Surgery should be required, when presenting themselves for examination in mechanical dentistry, to provide themselves with the following instruments, hitherto provided by the College: wax spatula (double ended), sculptors, gouge and handle, vulcanite files, gold files, pin-roughing and bending pliers, snipe-nose pliers, cutting nippers, broaches and handles, fret saw, one Melotte's moulding outfit, one Bunsen burner (laboratory), fine saws, special chasers, blowpipe for mouth (12 in.), solder tweezers, crown holder, curved shears, N.P. collar pliers, plain pin nippers, riveting hammer, and dividers (4½ in.). The following will be supplied by the hospital at which the candidates are examined—viz.: hammers for striking up plates, horn mallets, and ordinary casting materials and apparatus.

The f[illegible] appointed :—

[illegible] yle, W. G. Ridewood, T. G. St[illegible]

Anatomy (Conjoint Examining Board).—C. Addison, Arthur Keith, A. Thomson, and H. J. Waring.

Physiology (Conjoint Examining Board).—T. G. Brodie, G. A. Buckmaster, and W. H. Thompson.

Anatomy (Fellowship).—C. Addison, L. A. Dunn, A. Keith, and A. H. Young.

Physiology (Fellowship).—De Burgh Birch, L. E. Hill, E. W. Reid, and E. H. Starling.

Midwifery (Conjoint Examining Board).—G. F. Blacker, W. Duncan, A. H. N. Lewers, and J. H. Targett.

Public Health.—Part I., A. G. R. Foulerton; Part II., S. A. M. Copeman.

Mr. W. F. Haslam of Birmingham was elected a member of the Court of Examiners.

The President reported that a doctor's signboard, dated 1623, formerly the property of Mr. Manley Sims, had been purchased by the College.

The President also reported that he had purchased, on behalf of the College, a portrait by George Richmond, R.A., of the late Mr. Henry Hancock, President of the College in 1872.

A letter was read from Mr. D. B. Balding, F.R.C.S., of Royston, presenting to the College: (1) a small Prentice bleeding bowl bearing the date 1671, and (2) a hydrocele trocar (figured in vol. i., p. 420, third edition, of Benjamin Bell's Surgery, Edinburgh, 1787). The best thanks of the Council were given to Mr. Balding for his interesting gifts.

A letter was read from Mr. Thomas Bryant reporting the proceedings of the General Medical Council at its late session. The best thanks of the Council were given to Mr. Bryant for his services as the representative of the College on the General Medical Council.

The consideration of Mr. A. W. MAYO ROBSON'S motion—

> That a committee be appointed to consider the anomalies of the coroner's court in its relation to the medical profession,

was postponed.

A vote of thanks was unanimously given to Mr. Alfred Willett and Sir Frederick Treves, Bart., K.C.V.O., for their services to the College while members of the Council.

Looking Back.

FROM

THE LANCET, *SATURDAY*, JUNE 18, 1825.

LECTURES ON THE PRINCIPLES AND PRACTICE OF PHYSIC,

BY DR. ARMSTRONG.

Theatre of Anatomy, Webb Street.

LECTURE 29.[1]

If you were called to a patient affected with the simple form of scarlet fever, what would you do? The best thing at first, when the skin has become uniformly hot, is to wash the patient all over with tepid water; procure a large shallow tub, a common washing tub, and let the patient sit on a three-legged stool in the middle of it, the feet being covered by warm water; sponge the skin with warm water, then wipe it perfectly dry, and put him to bed between clean sheets. Give about two grains of calomel with a little rhubarb, and a dose of cold drawn castor oil a few hours afterwards. Let the diet be then arrowroot, and the drink cold water; pursue this plan in a cool airy apartment for three or four days, and the patient will generally be convalescent. Be careful not to expose him to cold then, as he might become dropsical. Our systematic writers have made dropsy almost a necessary consequence of scarlatina, but this is not the fact. I have seen, within the last six years, at least four hundred cases of scarlet fever, and I have only seen a *single* case in which dropsy occurred, which was owing to my directions being disregarded. The patient crammed himself with new bread, and cold or cramming are its usual causes. Dropsy, so far as I have observed subsequent to scarlet fever, arises often from inattention on the part of the patient, and occasionally from ignorance on the part of [illegible]

The treatme[illegible] fever must be regulated acc[illegible] are called to a patient in whom the fever is ardently developed, and the throat much inflamed, apply eight or ten leeches to the part; sponge the surface of the body in the way I have mentioned, or pour about two gallons of tepid water at once over the whole surface. In the next place, give a brisk aperient, as a combination of calomel and rhubarb or jalap, followed up by an infusion of senna with sulphate of magnesia. Use a gargle also composed of diluted sulphuric acid with a little syrup; keep the patient at rest in the recumbent posture, and keep him very cool, and on a very spare diet. This is the plan that I usually adopt.

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[1] Only a part has been transcribed.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE wet weather last Sunday has considerably reduced the sums which might have been collected and many of the clergy have written to us to this effect. In a large number of churches it is intended on Sunday next to make an appeal to those who were absent last Sunday to add their contributions to the amount collected on that occasion. No doubt many will gladly avail themselves of this opportunity. The Lord Mayor, in a letter to the press which we publish this week, has appealed to the clergy to place the situation before their congregations to-morrow and to invite contributions to be sent to themselves or directly to his Lordship. This we are sure—gratefully sure—the majority of the clergy will do, although the increased trouble thus entailed upon them is very serious. It is too early at present to attempt to forecast what the grand total of the Fund for this year is likely to be, but the unfavourable weather has, we fear, spoilt all chance of its reaching the much-coveted and badly-needed £100,000. The following are some of the chief amounts received at the Mansion House, or notified directly to us as having been collected, on behalf of the Metropolitan Hospital Sunday Fund up to Wednesday last:—

	£	s.	d.
St. Paul's Cathedral	5250	0	0
St. Michael's, Chester-square	1405	0	0
"In Memoriam, S. L., died May 1, 1895"	500	0	0
All Saints', Ennismore-gardens	460	0	0
Theistic Church, Swallow-street	280	0	0
Emmanuel Church, Wimbledon	203	0	0
St. James's, Piccadilly	174	0	0
Christ Church, Chislehurst	162	0	0
St. Michael's, Paddington	151	0	0
St. Nicholas and St. John the Baptist, Chislehurst	137	0	0
Westminster Abbey	134	0	0
St. Augustine's, Highbury	117	0	0
Lemsford Parish Church	112	0	0
St. Mary Boltons	110	0	0
Mr. J Morris	100	0	0
Lady Kortright	100	0	0
Mr. A. Miller	100	0	0
Mr. Richard Foster	100	0	0
St. John's Presbyterian Church, Kensington	100	0	0
Dulwich College Chapel	70	0	0
St. Mary's Parish Church, Merton	52	0	0
Crouch-hill Presbyterian Church	50	0	0
Cuddington Parish Church	44	0	0
St. Anne's, Wandsworth	59	0	0
St. Mary Magdalene, Enfield	39	0	0
Carmelite Church, Kensington	35	0	0
Chiswick Parish Church	32	0	0
Camberwell Parish Church	34	0	0
St. James's, Camberwell	32	0	0
Farm-street Church	46	0	0
Messrs. J. H. Vavasseur and Co.	52	0	0
Bromley, Kent, Wesleyan Chapel	32	0	0
Christ Church, Newgate-street	51	0	0
St. James's, Norlands	40	0	0
St. Gabriel's, Warwick-square	56	0	0
St. Andrew's, Watford	53	0	0
St. Mary's, Shortlands	81	0	0
Lewisham High-road Congregational Chapel	45	0	0
Great Warley Parish Church	56	0	0
The Oratory, Brompton	65	0	0
St. George's, Bloomsbury	39	0	0
St. Matthew's, Sydenham	33	0	0
Jessey De Wend	50	0	0
Miss Druce	50	0	0
West Wickham Parish Church	46	0	0
St. Stephen's, Clapham Park	76	0	0
St. Mary's, Lewisham	58	0	0
Aldenham Parish Church	66	0	0
St. Mildred's, Lee	41	0	0
All Souls', Finchley	80	0	0
St. James's, Kidbrook	93	0	0
St. Andrew's, Leytonstone	81	0	0
St. Alfege, Greenwich, Parish Church	60	0	0
St. George's, Perry Hill	58	0	0
St. Matthew's, Sinclair-road, Kensington	51	0	0
Central-hill Baptist Chapel, Upper Norwood	83	0	0
Church of the Annunciation, Chislehurst	78	0	0
Bromley, Kent, Parish Church	76	0	0
St. Mary's, Plaistow	60	0	0
St. Andrew's, Totteridge	52	0	0
St. Luke's, Hornsey	43	0	0
St. Matthew's, Brixton	44	0	0
Ilford Parish Church and Chapel	48	0	0
St. Luke's, Hampstead	37	0	0
St. Augustine's, Queen's-gate	64	0	0
St. John's, Ealing Dean	35	0	0
Magdalen Hospital, Streatham	33	0	0
rent Church, Enfield	35	0	0

BANQUET TO SIR JOHN WILLIAMS.

SIR JOHN WILLIAMS, Bart., K.C.V.O., M.D., F.R.C.P., having decided to retire from professional work and to reside in the county of his birth, Carmarthenshire, a large number of leading members of the profession and others who occupy notable positions in Welsh circles resolved to entertain him at a banquet and this was arranged for the evening of June 12th at the Royal Hotel, Cardiff.

At the banquet, over which the Mayor of Cardiff (Alderman Thomas, J.P.) presided, amongst those present were:—Principal Griffiths and Dr. A. F. Dixon (of the University College), Sir Alfred Thomas, M.P., Dr. Edwards (the *doyen* of Cardiff practitioners), Dr. Griffiths, Mr. Ebenezer Davies (Swansea), Principal Rhys (Oxford), Judge Gwilym Williams, Mr. J. Lynn Thomas, C.B., Mr. C. Biddle (Merthyr), Mr. Evan N. Davies, J.P. (Penygraig), Mr. Ivor H. Davies (Weston-super-Mare), Dr. M. O Davies (Cardiff), Dr. Maurice G. Evans, Dr. P. Rhys Griffiths, Dr. Pritchard, Dr. A. Garrod Thomas, Dr. T. H. Morris, Dr. C. T. Vachell, Dr. W. Williams, Dr. W. Mitchell Stevens, Dr. W. Sheen, Dr. J. J. Buist, Mr. W. F. Brook (Swansea), Mr. E. Tenison Collins, Dr. Herbert Cook, Dr. F. P. S. Cresswell, Mr. H. L. Hughes (Dowlais), Dr. J. D. Jenkins (Pentre), Dr. S. Cromwell Jones (Merthyr Tydvil), Mr. S. Lloyd Jones (London), Dr. J. Howard-Jones (Newport), Dr. Cyril Lewis, Dr. Henry Lewis, Dr. E. J. Maclean, Dr. William Martin, Mr. D. Naunton Morgan (Clydach), Mr. G. Neale, J.P. (Barry), Dr. Donald R. Paterson, Dr. R. Pritchard, Dr. J. H. Rees (Penarth), Mr. J. Robinson (Cardiff), Dr. Scholberg (University College, Cardiff), Mr. T. Stevens, Dr. William Taylor (Cardiff), Dr. W. E. Thomas (Ystrad), Mr. D. J. Thomas (medical officer of health, Merthyr Tydvil), Dr. A. Garrod Thomas (Newport), Dr. Tatham Thompson, Mr. J. Llewellyn Treharne, Dr. A. H. Trowm, Dr. E. Walford, Mr. T. J. Webster, J.P., Mr. C. J. Weichert (Penygraig), Dr. William Williams (medical officer ot health of Glamorganshire), Mr. J. H. Williams (Aberavon), and Mr. D. J. Williams (Llanelly).

Sir John Williams was received with great enthusiasm. The after-dinner proceedings were characterised by much animation and appreciative references to the character and record of the guest of the evening.

In returning thanks for the toast of "The Services" Colonel QUIRK, C.B., referred to the typhoid-infected blankets, responsibility for which, he said, folk had been trying to saddle upon the army, but now the medical equipment had become the object of attack in this connexion. The medical officers ought, it was contended by the critics, to have seen that these coverings were destroyed at the inception of the outbreak, but he was confident that the medical profession would be quite equal to vindicating its own cause and case.

The MAYOR then gave the toast of the evening, "Sir John Williams," and in doing so referred to the profound sentiment of affection which Sir John Williams, in spite of the strain of heavy professional responsibilities and a career of strenuous application, cherished for his native country. This was shown in the peerless collection of Welsh books and manuscripts which he had gathered together and which constituted a really great library. The place which he occupied in the confidence of illustrious circles was indicated by the notable fact that Sir John Williams had been decorated with the Victorian Order by His Majesty the King in person. He (the Mayor) hoped now Sir John Williams had returned again to Wales to live amongst them that these after days would be serene and unclouded and that Wales would be privileged to benefit again by the interest which Sir John Williams felt in the advancement of its progress and general welfare. There was one particular sphere in which Sir John Williams could be an incalculable service to them as Welsh people, and that was in relation to the medical school which it was sought to establish at Cardiff. They were very anxious that this should be the means of furthering developments of science and study in the Principality and he commended to the notice of Sir John Williams the fact that he might come from his Carmarthenshire home to Cardiff and stay in the Welsh metropolis for three hours and afterwards go home and be in time for dinner.

Sir ALFRED THOMAS, M.P., as representative of the Welsh

University College, also spoke to the toast and referred with enthusiasm to the perseverance, courage, and integrity which had been evidenced by Sir John Williams in the course of a striking career. Sir John Williams had come back to his countrymen in the zenith of his fame with a clean bill of health, sails all set, dropping anchor in the haven of his old home. It was not for him to suggest to Sir John Williams what he should do now. That would be both a delicate and a perilous task, and besides a superfluous one, for Sir John Williams knew very well how best to act. But he would join with the Mayor of Cardiff in expressing a deep desire that Sir John Williams should ally himself with the medical school of the University College which, he remarked amid much applause and laughter, he believed to be the "best college on earth."

The toast was received with prolonged cheering and musical honours, and Sir JOHN WILLIAMS, who appeared moved by the greeting which was accorded to him, rose to reply to the toast. To acknowledge such generous appreciation, he said, was difficult—almost as difficult an ordeal as that which one experienced when lecturing for the first time to that extremely wideawake class of critics, the medical students. He could only thank his friends very warmly and sincerely for their goodwill. Some while ago he had been asked by one of the newspapers which enjoyed a large circulation to give its columns some of his reminiscences. He felt that these were such as could not appear in such circumstances. And so in expressing his gratification at the sentiments which were manifested towards him he must now confine himself to his very sincere acknowledgments. But he was glad to see amongst them so many old friends, and especially glad to see Mr. Ebenezer Davies of Swansea who had given him his start in the medical profession and bestowed upon him much valued advice.

Sir John Williams resumed his seat amid renewed cheers.

[illegible] Dr. T. [illegible] of he [illegible] to the "land of his fathers"; and it wa[illegible] dentally that Swansea intended to give to [illegible] very [illegible] rked [illegible] en ha[illegible] All Welshmen were proud of a man who from his very student days right on to these meridian hours of life had ever been instinct with the inspiration of hard work and great abilities greatly applied. It was something for them to be glad that when those who professed chill scepticism as [illegible] of Welsh people put the [illegible] "Where are your Welsh-[illegible]e to point to their guest of the evening as one of those who brought to the records of Wales a lifetime of service and honour.

Professor RHYS in replying to the toast of "The University of Wales" pointed out that it would be of incalculable advantage to Wales and those connected with the promotion of its educational and social interests if on questions which demanded an expert knowledge of medicine and medical matters they were able to have the counsel and assistance of so great an authority as Sir John Williams.

Sir JOHN WILLIAMS afterwards proposed "The South Wales and Monmouthshire University College" and delivered an address in which he dealt with the Celtic character. He minutely compared Wales with Scotland and predicted, in spite of the drawbacks which handicapped Welsh students, better things and more substantial results in days to come. The dawn was breaking and this was evidenced by the success of their medical school at Cardiff. Half a century had wrought an immense change in the condition of the Welsh people. He noted with satisfaction that the South Wales College differed from the other Welsh colleges in having a faculty of medicine where the future medical men of Wales would be trained. He hoped that before long the University of Wales would have powers to [illegible] and explained that finan-[illegible]uthshire College could not go on much longer as now, for if help was not forthcoming the fees would have to be raised. As for the medical school, he grieved that they were about to lose their valued colleague, Professor Dixon.

Professor DIXON also responded and said that considerable distinction had characterised the career of some of the students of the medical school at the Cardiff College.

Vocal and instrumental selections were given during the evening and the whole proceedings were very pleasant and successful, this result being due in a large degree to the admirable arrangements of Mr. Austin Jenkins (the registrar of the University College) and Mr. Lynn Thomas.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 9343 births and 4022 deaths were registered during the week ending June 13th. The annual rate of mortality in these towns, which had been 15·5, 14·9, and 14·3 per 1000 in the three preceding weeks, further declined to 13·9 per 1000 last week. In London the death-rate was 12·4 per 1000, while it averaged 14·6 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 4·7 in Hornsey, 5·3 in Smethwick, 5·7 in Willesden, 6·4 in Walthamstow, 8·5 in Croydon and in York, 9·0 in Tottenham, and 9·1 in Handsworth; the highest rates were 18·8 in Oldham, 19·3 in Liverpool, 19·4 in Burnley, 19·6 in West Bromwich and in Preston, 21·5 in Coventry, 22·5 in Middlesbrough, and 25·1 in Great Yarmouth. The 4022 deaths in these towns last week included 404 which were referred to the principal infectious diseases, against 461, 434, and 397 in the three preceding weeks; of these 404 deaths 124 resulted from measles, 77 from diarrhœa, 76 from whooping-cough, 56 from diphtheria, 39 from scarlet fever, 19 from "fever," and 13 from small-pox. No death from any of these diseases was registered last week in Brighton, [illegible] ow, Wolverhampton, Coventry, Wigan, [illegible] esbrough; from diphtheria in Great [illegible] try; from whooping-cough in Oldham [illegible] from "fever" in West Bromwich [illegible]; and from diarrhœa in Great Yarmouth and Hanley. The mortality from scarlet fever showed no marked excess in any of the large towns. Of the 13 fatal cases of small-pox registered during the week three belonged to Liverpool and one each to Leicester, Derby, Bootle, Bolton, Manchester, Oldham, Rochdale, Halifax, Bradford, and Sunderland. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals which had been 64, 60, and 72 at the end of the three preceding weeks, had declined again to 64 at the end of last week; nine new cases were admitted during the week, against 19, 10, and 24 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital on Saturday, June 13th, was 1710, against numbers increasing from 1662 to 1785 on the eight preceding Saturdays; 145 new cases were admitted during the week [illegible] ceding weeks. [illegible] tory organs in L[illegible] in the three preceding weeks, further declined last week to 141 and were 59 below the number in the corresponding period of last year. The causes of 45, or 1·1 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Birmingham, Nottingham, Newcastle-on-Tyne, and in 50 other smaller towns; the largest proportions of uncertified deaths were registered in Grimsby, Liverpool, Manchester, Sheffield, and South Shields.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 17·2, 18·4, and 18·2 per 1000 in the three preceding weeks, further declined to 17·5 per 1000 during the week ending June 13th, but was 3·6 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 13·7 in Dundee and 13·8 in Paisley to 18·8 in Glasgow and 23·3 in

Greenock. The 574 deaths in these towns included 20 which were referred to whooping-cough, 20 to diarrhœa, three to measles, three to scarlet fever, two to "fever," and one to diphtheria, but not one to small-pox. In all, 49 deaths resulted from these principal infectious diseases last week, against 51, 70, and 65 in the three preceding weeks. These 49 deaths were equal to an annual rate of 1·5 per 1000, which was slightly above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 22, 28, and 25 in the three preceding weeks, further declined last week to 20, of which 10 occurred in Glasgow, four in Greenock, and three in Edinburgh. The deaths from diarrhœa, which had been 18 in each of the two preceding weeks, increased to 20 last week and included 11 in Glasgow, three in Edinburgh, and three in Aberdeen. The fatal cases of measles, which had been six, seven, and nine in the three preceding weeks, declined again last week to three. The deaths from scarlet fever, which had been six and seven in the two preceding weeks, decreased again to three last week; while the two fatal cases of "fever" corresponded with the number in the preceding week. The deaths referred to diseases of the respiratory organs in these towns, which had been 114 and 111 in the two preceding weeks, further declined last week to 75, and were 54 below the number in the corresponding period of last year. The causes of 23, or more than 4 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 22·4, 22·2, and 22·2 per 1000 in the three preceding weeks, declined again to 22·4 per 1000 during the week ending June 13th. During the past four weeks the death-rate has averaged 22·4 per 1000, the rates during the same period being 13·7 in London and 17·3 in Edinburgh. The 163 deaths of persons belonging to Dublin registered during the week under notice showed a decline of two from the number in the preceding week and included nine which were referred to the principal infectious diseases, against 11, seven, and ten in the three preceding weeks; of these five resulted from whooping-cough, two from "fever," one from small-pox, and one from scarlet fever, but not one from measles, from diphtheria, or from diarrhœa. These 19 deaths were equal to an annual rate of 1·2 per 1000, the death-rates last week from the principal infectious diseases being 1·2 in London and 1·3 in Edinburgh. The fatal cases of measles, which had been one, two, and one in the three preceding weeks, increased again last week to five. The deaths from "fever," which had been two, one, and three in the three preceding weeks, declined again to two last week. One fatal case of small-pox was registered last week, against four, none, and three in the three preceding weeks. The 163 deaths in Dublin last week included 29 of children under one year of age and 38 of persons aged upwards of 60 years; the deaths of infants slightly exceeded the number in the preceding week, while those of elderly persons showed a marked decline. Five deaths from violence and five inquest cases were recorded; and 57, or more than a third, of the deaths occurred in public institutions. The causes of ten, or more than 6 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeon A. Kidd to the *Hood.* Staff Surgeons: R. Hill to the *Victory;* H. B. Marriott to the *Tribune;* E. St. M. Nepean to the *Æolus;* W. G. Stott to the *Melampus;* and R. Miller to the *Spartan.* Surgeons: W. N. L. Cherry to the *Hood;* S. H. Woods to the *Pembroke,* additional for disposal. Civil Practitioner R. Magill to be Surgeon and Agent at Newcastle and Dundrum.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel Thomas A. Dixon retires on retired pay. Dated June 13th, 1903.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant-Colonel G. R. T. Phillips having resigned his appointment in the Imperial Yeomanry ceases to be an officer in the Army Medical Reserve of Officers. Surgeon-Lieutenant E. Downes having resigned his appointment in the Volunteers ceases to be an officer in the Army Medical Reserve of Officers.

IMPERIAL YEOMANRY.

The undermentioned gentlemen to be Surgeon Lieutenants:—John Leach (dated June 10th, 1903) and John Robert Kennedy (dated June 10th, 1903).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 2nd Hampshire: John Henry Frederick Way, late Captain, to be Surgeon-Lieutenant. Dated June 13th, 1903.

Submarine Miners: The Tay: John Yule Mackay to be Surgeon-Lieutenant. Dated June 13th, 1903.

Rifle: 2nd Volunteer Battalion the Royal Warwickshire Regiment: Surgeon-Lieutenant J. Orton to be Surgeon-Captain. Dated June 13th, 1903. 4th Volunteer Battalion the Cameronians (Scottish Rifles): Surgeon-Lieutenant A. F. Wilson-Gunn to be Surgeon-Captain. Dated, June 13th, 1903. 22nd Middlesex: Surgeon-Captain W. J. Harnett resigns his commission and is granted the honorary rank of Surgeon-Major, with permission to wear the uniform of the corps on retirement. Dated June 13th, 1903. 1st Cadet Battalion the King's Royal Rifle Corps: Surgeon-Lieutenant R. Roche to be Surgeon-Captain. Dated June 13th, 1903. 1st (Hallamshire) Volunteer Battalion the York and Lancaster Regiment: Surgeon-Major J. W. Martin to be Surgeon-Lieutenant-Colonel. Dated June 13th, 1903. 2nd Volunteer Battalion the Gordon Highlanders: Surgeon-Lieutenant H. G. Cowie resigns his commission. Dated June 13th, 1903.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The Manchester Companies: Lieutenant W. L. Bentley to be Captain. Dated June 13th, 1903.

VOLUNTEER INFANTRY BRIGADE BEARER COMPANY.

Welsh: Lieutenant A. W. Sheen to be Captain. Dated June 13th, 1903.

THE MEDICAL CORPS OF THE UNITED STATES NAVY.

The Fifty-seventh Congress in its last session, states the *Maryland Medical Journal,* provided for an increase of 150 members in the Medical Corps of the Navy, 25 of whom are to be appointed each calendar year for six years. By the enactment of this law there is afforded to the young physicians of America an opportunity to take service in the navy of the United States and an assurance of the continuance of this opportunity for the next six years. The future prospects of the medical officer of the navy, both for promotion and professional opportunity, are very bright, says our American contemporary, and the plan of enlargement of the naval establishment already adopted and authorised, as well as that in contemplation, gives assurance that this outlook will grow even more promising. The Medical Corps of the United States Navy consists at the present time of the following numbers and grades. One surgeon-general with the rank of admiral (equivalent to brigadier-general in the army); 15 medical directors with the rank of captain (equivalent to colonel in the army); 15 medical inspectors with the rank of commander (equivalent to lieutenant-colonel in the army); 85 surgeons with the rank of lieutenant-commander (equivalent to major in the army); 23 passed assistant surgeons with the rank of lieutenant (equivalent to captain in the army); 56 assistant surgeons with the rank of lieutenant, junior grade (equivalent to first lieutenant in the army). There are 27 vacancies in the grade of assistant surgeon for the year 1903.

ARMY CANTEENS.

As our readers are aware, a controversy has been going on for some time on the subject of army canteens which, seeing that it affects the social comfort, health, and general well-being of the soldier, is not altogether without medical interest. By a recent order the War Office has modified its previous announcement that army canteens were to be conducted on the regimental system. It has now been wisely left to the army to manage its own canteens in its own way. Power is given to those in direct command of troops to follow the particular system which is preferred by the corps unit and is thought likely to prove most advantageous to the soldier. So many objections have been urged by officers of experience against the working of the regimental system on its old lines and, on the other hand, there are so many reasons in favour of the tenant system, that the War Office has been driven to adopt the wise course of leaving the matter in the hands of the local military authorities.

PARTURIUNT MONTES.

It is a very curious circumstance which cannot have escaped observation that whenever there is any unusual talk of military reform the more immediate, and sometimes the only apparent, result is some alteration or other in the officer's or soldier's dress. The ugly flat pancake cap to be seen on the heads of Guardsmen is closely followed by a question as to whether a white collar is allowable or not in uniform, and if so, the exact amount of it permitted to be visible. It can scarcely be said that these changes were necessary or desirable in a hygienic or artistic point of view.

ROYAL NAVY MEDICAL SERVICE.

We are extremely glad to notice that Staff-Surgeons E. B. Townsend and P. B. Handyside have been recently promoted
icuous professional merit.
It is a
und principle on the part
of the
congratulate the officers
in question.

Correspondence.

"Audi alteram partem."

METROPOLITAN HOSPITAL SUNDAY FUND.

To the Editors of THE LANCET.

SIRS,—The deplorable weather on "Hospital Sunday" prevented so many people from going to their places of worship that the collections on that day have been half ruined. It will be a lasting pity if when the needs of the hospitals are so especially pressing and when our generous benefactor, Mr. George Herring, is again offering to add a quarter to all the church and chapel offertories sent in, the result of the Fund this year should be so lamentably below the average.

In these circumstances I venture to appeal to the clergymen and ministers to state these facts to their congregations next Sunday and to invite those who were absent on Hospital Sunday to remit their customary contributions either to them or to me. It would, I suppose, be too much to ask that the offertory at one of the services at least should be dedicated to the Hospital Sunday Fund?

I am, Sirs, yours faithfully,
MARCUS SAMUEL, Lord Mayor.
The Mansion House, London, E.C., June 17th, 1903.

ASSOCIATION OF MIDLAND RAILWAY SURGEONS.

To the Editors of THE LANCET.

SIRS,—The first annual general meeting of the above association will be held at the Wyvern Hotel, Leicester, on Thursday, June 25th, at 3.30 P.M. As important business is to be transacted it is desirable that all the surgeons to the Midland Railway Friendly Society should make an effort to attend, and, Sirs, if you will kindly give prominence to this announcement in your valuable journal it will greatly assist by enabling those Midland railway surgeons whose names are still unknown to the association to attend the meeting or to communicate with me so that if they wish their names may be added to the existing list of members.

I am, Sirs, yours faithfully,
A. E. PAYNE,
Honorary Secretary, *pro tem.*
2, Melbourne-street, Leicester, June 16th, 1903.

A NEW METHOD OF DETECTING PLAGUE BACILLI IN BLOOD.

To the Editors of THE LANCET.

SIRS,—The difficulty in detecting plague bacilli in the blood is so well known that we venture to bring to your notice a method which has hitherto given us very good results in all cases, both early and late. It will be found very useful to those in charge of general hospitals where it is difficult to keep out plague cases and where one is anxious to come to a diagnosis as early as possible. The blood film should be taken by Ross's method, making the film a little larger and thinner than for malaria; decolourise and stain, when plague bacilli will invariably be found. All our last cases have been diagnosed in this way and the diagnosis confirmed at the infectious hospital.

We are, Sirs, yours faithfully,
J. BELL,
Superintendent;
E. A. R. LAING,
Assistant Superintendent.
Government Civil Hospital, Hong-Kong, May 14th, 1903.

BLOOD PRESSURE.

To the Editors of THE LANCET.

SIRS,—May I ask Dr. Oliver why, in his address entitled "A Few Jottings in Physiological Medicine," he estimates blood pressure in terms of *cubic* millimetres of mercury? I thought at first that the word "cubic" must be a misprint, but as it occurs throughout the address it is apparently intentional. Pressure is measured by the height of a column of mercury (or other fluid) and not by its volume. With regard to the rise of blood pressure at high altitudes, will not this be explained by a diminution of the partial pressure of the oxygen? The pulse-rate has been found, in balloon ascents, to increase with the height up to 24,000 feet.

I am, Sirs, yours faithfully,
CHARLES POWELL WHITE.
St. Thomas's Hospital, S.E., June 16th, 1903.

THE UNRESTRICTED OUTPUT OF INFLAMMABLE COMBS.

To the Editors of THE LANCET.

SIRS,—You have, I think, several times called attention to the danger of using dressing combs prepared from xylonite or other analogues of gun-cotton. The risk appeared to me to be very trifling, but that view has been modified by the case of a young girl who was lately brought to me suffering from cellulitis of the scalp. It seems that she was in the habit of wearing a comb in her hair and one Sunday, whilst preparing her father's dinner, she held down her head in front of the fire. Suddenly the comb became ignited and burned up with a flash, setting fire to her hair. She fell on the ground in a faint, but luckily her brother had the presence of mind to wrap a coat around her head and to extinguish the flames, leaving her, however, in a state of collapse and with other effects of the accident from which she did not recover for weeks.

I understand that the original patent for making combs from xylonite has expired and that now the markets are flooded with imitations which are much more liable to ignition than the original. Surely, then, some restriction ought to be placed on their sale or at least the purchaser ought to have fair warning of the risk.

I am, Sirs, yours faithfully,
J. C. MCWALTER, M.D. Brux., D.P.H.
Dublin, June 13th, 1903.

ASEPTIC AND ANTISEPTIC SURGERY.

To the Editors of THE LANCET.

SIRS,—I have read with great interest Mr. Henderson's remarks in THE LANCET of June 13th, p. 1697, and entirely agree with him. By strictly adhering to aseptic and antiseptic methods it is quite possible for a general practitioner to undertake some of the major operations of surgery with most gratifying results. During the last three years I have performed three laparotomies for ectopic pregnancy, suppurating ovarian cyst, and a cyst of the right broad ligament,
[illegible] in the inguinal canal. In every
ion, although these operations
ent's home. I also amputated
and did a good many minor
it of strict asepsis and anti-
sutures, and dressings. I
invariably see that the room is thoroughly disinfected and stripped of carpets, mats, dirty curtains, &c., prior to the operation. With these precautions my experience is that

returning from Egypt, owing to typhoid fever contracted in the lazaretto at Frioul. M. Teissier, at the meeting of the Academy of Medicine held on June 2nd, complained of the whole French sanitary service in which, he said, nothing is done to guard against the entry of infectious diseases at French ports, although every custom which can annoy passengers is religiously observed. The disinfection of ship, cargo, and of passengers' baggage is absolutely illusory. Bales of merchandise which very probably shelter plague-stricken rats and the mail-bags are disembarked without any disinfection. The baggage of passengers is not opened but is simply sprinkled with a weak solution of sublimate. In 1902 the ship *Portugal* arrived at Marseilles from Alexandria where plague was prevalent. Hundreds of bales of cotton full of rat-holes were disembarked and without more ado were given free pratique. As for the disinfection of personal effects each passenger was compelled to give up nothing but a pair of socks, a handkerchief, and a shirt. The excuse given was that the disinfecting stove was too small to take all the dirty linen of the passengers. The rest of the baggage was allowed to enter Marseilles without any other formality. M. Teissier compared this method with the English system which, according to him, works tactfully and protects the ports while conserving the rights of individuals and does not interfere unduly with trade. The French method comes to an end with a vexatious imprisonment in a barrack, as badly managed as possible. "Suspects" stay there for a term the duration of which is arbitrarily fixed by the director of the Sanitary Department. When this term is ended anyone can go where he likes and thus if later plague should declare itself such person becomes a focus of infection in an inland town without the sanitary authorities having had any warning. M. Teissier argued that preventive injections of anti-plague serum are a certain safeguard against the development of the disease in persons coming from an infected region if there is no sign of plague on them at the port of entry and it would be easy to make such injections compulsory. Finally, M. Teissier proposed that a consultative committee of control should be nominated to sit conjointly with the authorities of the sanitary service and to this committee should be assigned for judgment all cases of litigation and the duration of the quarantine should also be fixed by it. He demanded also the suppression of the discretionary power of the director of the Sanitary Department, for this official, as things now stand, can refuse entry to France of Frenchmen sailing under a foreign flag. As a consequence, during the rest of their voyage, which may last ten days, to Plymouth or London these unfortunate people, who may be coming home ill, though not infectious, are quite likely to die on the way and to be then buried at sea. In a word, M. Teissier considers that the whole French sanitary service should be reorganised, due consideration being given to preventive injections of serum, and he recommended the introduction of the English system of a sanitary passport which provided safety and was not so vexatious as imprisonment. The Academy will shortly proceed to the discussion of this important matter.

June 16th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Plague in Berlin.

As already mentioned in THE LANCET of June 13th, p. 1684, a young medical man has just lost his life in Berlin in very sad circumstances and another name has been added to the long list of medical martyrs to science. The deceased was Dr. Milan Sachs of Agram in Croatia, who had been sent by the Austrian Government to Berlin for the purpose of studying infectious diseases in Professor Koch's Institute. He fell ill on June 2nd and in the evening of June 4th he became so much worse that he was admitted into the municipal hospital of Charlottenburg, a suburb of Berlin where he lived. The symptoms appeared to point to pneumonia, but when it became known that the patient had worked in Professor Koch's laboratory, and especially in the plague department, the sputum was carefully examined, with the result that plague bacilli were found and Dr. Sachs was thereupon immediately removed with the utmost precautions to the department for infectious diseases which belongs to Professor Koch's Institute and is in connexion with the Charité Hospital. Here he received injections of Roux-Yersin serum, but notwithstanding all that could be done he unfortunately succumbed on the evening of the 5th. For the purpose of discussing the measures which it might be necessary to take in view of the possibility that the disease might spread a meeting was at once held in the Charité Hospital, under the presidency of the chief of the Berlin police, those present including officials of the Imperial Health Office, the chief medical officer of the Berlin police, the medical member of the Berlin town council, and the medical staff of the Charité Hospital and the Charlottenburg Hospital. The meeting agreed that the fact of a case of plague having occurred in the city should be communicated to the newspapers as the best means of preventing the alarm which was likely to be created by the publication of vague and inaccurate statements. Strict isolation of all persons who had been in communication with Dr. Sachs during his illness was also ordered, and for this purpose some of the wards of the department for infectious diseases were cleared of the patients already in them and were reserved exclusively for the reception of those who had been exposed to the danger of infection with plague. Not only the family with whom Dr. Sachs had lived in Charlottenburg, but also several hospital nurses, attendants, and porters, and three medical men were isolated; no communication with them was allowed and policemen were stationed at the entrance to prevent the orders to that effect being evaded. All the furniture and articles of general use in the residence which Dr. Sachs had occupied were destroyed by fire, full value being paid to the owner by the Treasury in accordance with the provisions of the Infectious Diseases Act; the place was then completely emptied and thoroughly disinfected. Meetings of the authorities, both police and sanitary, took place nearly every day under the presidency of the Minister of Public Instruction, acting as chief of the Government medical department. It has been reported that the Government intended to prohibit the carrying on of investigations relative to plague and other virulent diseases. This is erroneous, as it is recognised that such researches are indispensable, but it is probable that experimental work will be more strictly controlled in future and that the admission of foreigners to this particular laboratory will be rendered more difficult. All those who have been placed in isolation received injections of Roux-Yersin serum. Their health has hitherto been quite satisfactory with the exception that one of the male attendants who had nursed Dr. Sachs at the Charlottenburg Hospital felt ill after admission and his temperature rose slightly, so that he was suspected of having caught the disease, but as he completely recovered after 24 hours his symptoms were attributed to the injections, especially as microscopical examination of his blood showed nothing abnormal. Subsequently, however, his sputum was tinged with blood and was found to contain virulent plague bacilli, the injections of Roux-Yersin serum were therefore continued and the patient's state is now said to be satisfactory. The public do not exhibit any alarm on the subject, being evidently convinced that all necessary precautions are being taken.

Physiological Action of the Becquerel Rays.

Dr. Loudon of St. Petersburg has published in the *Berline* *Klinische Wochenschrift* some interesting observations relativ to the action of the Becquerel rays on the nervous syste and on the eye. He found that when a box containing bromide of radium was placed in a cage in which mice wer kept the animals became paralysed and comatose and die in five days. He also found that persons who are eithe totally blind, or have only the feeblest possible perception o light, are peculiarly sensitive to the Becquerel rays and ar able to form visual conceptions of the contour of objects th shadows of which are shown on a screen by means of th rays.

June 15th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Quarantine Laws of the United States.

VESSELS arriving under the following conditions shall b placed in quarantine: (*a*) with quarantinable disease on boar or having had such disease on board during the voyage (*b*) any vessel which the quarantine officer considers infected (*c*) if arriving at a port south of the southern boundary o Maryland in the season of close quarantine, May 1st t

Nov. 1st, directly or *viâ* a northern port, from a tropical American port, unless the said port is known to be free from yellow fever; (*d*) in the case of vessels arriving at a northern port without sickness on board from ports where yellow fever prevails the *personnel* shall be detained under observation at quarantine to complete five days from the port of departure; and (*e*) towboats and other vessels having had communication with vessels subject to quarantine shall themselves be quarantined if they have been exposed to infection. Vessels arriving under the following conditions need not be subject to quarantine: (*a*) vessels from yellow fever ports bound for ports in the United States north of the southern boundary of Maryland with good sanitary condition and history, having had no sickness on board at ports of departure, *en route* or on arrival, provided they have been five days from the last infected or suspected port; and (*b*) vessels engaged in the fruit trade may be admitted to entry without detention provided that they have complied in all respects with the special rules and regulations made by the Secretary of the Treasury with regard to vessels engaged in the said trade.

To restrict Hospitals for Consumptives.

Governor Odell has signed the Goodsell-Bedell Bill prohibiting the establishment of any hospital or camp for consumptives in any town in New York State without the formal consent of the supervisors of the county and town board of the town.

Death of Dr. T. G. Morton.

Dr. Thomas G. Morton, the well-known surgeon of Philadelphia, died at Cape May, N.J., on May 20th after a short illness. Dr. Morton was born in Philadelphia on August 8th, 1835, and was the son of Samuel George Morton, himself a distinguished medical practitioner. He graduated in medicine from the University of Pennsylvania in 1856, after which he began practice as a surgeon in his own city. At the beginning of the American civil war he became actively identified with the establishing of military hospitals. He was surgeon at Satterlee Hospital and consulting surgeon to the United States Hospital at Chesnut Hill, Pennsylvania. He was the founder of the Philadelphia Orthopædic Hospital and in 1876 was appointed a commissioner to erect a State insane asylum for the southern district of Pennsylvania. He devised many mechanical improvements in hospitals, he wrote many papers on surgical matters, and published works on the transfusion of blood and its practical application. The late Dr. Morton was a member of several foreign medical and scientific bodies.

An Automobile Bill in New York State.

Governor Odell has signed the Doughty-Bailey Automobile Bill. The principal features of the new law are as follows. Speed is restricted to four miles an hour when crossing a dam or causeway less than 20 feet in width. Speed is restricted to eight miles an hour within a radius of half a mile from a post-office or a greater radius if the local authorities so elect, when passing in either direction a person driving a horse or domestic animal or passing a pedestrian in the roadway, when crossing an intersecting main highway, and in the closely built-up portions of cities. Speed is restricted to ten miles an hour when passing a public school during school hours or a church during the hours of service. Speed is restricted to ten miles an hour in the suburbs of cities where the houses are more than 100 feet apart. Speed is restricted to 20 miles an hour in the open country where post-offices, school-houses, churches, causeways, cross roads, drivers or pedestrians do not conflict. A motor must be stopped on request of a rider or driver.

June 8th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Treatment of Consumption in Victoria.

COMPARATIVELY little has been done in Victoria for the treatment of early cases of consumption in sanatoriums. One institution of the kind has been established for many years at Echuca and more recently a branch of this establishment was started at Macedon. Consumptive patients, generally in advanced stages of the disease, are also received at the Austin Hospital for Incurables. The Board of Health is considering the whole question of the treatment of tuberculosis and Dr. Gresswell has just visited the sanatorium at Echuca. He considers that the area of ground is too small and that the site is not suitable because of its being shelterless and cramped and of there not being sufficient area for recreation purposes. Some of the country hospitals have offered to receive consumptive patients referred to them by the Board of Health. The Amherst Hospital will accommodate eight and the Kilmore Hospital six patients.

The Lunacy System of Victoria.

Recent criticisms of the lunacy system are commented upon in a report which the Chief Secretary has received from Dr. Jamieson and Dr. Joske, who are two of the official visitors to the metropolitan asylums. They state that their aim has been "to present an account of the institutions as they are, not passing over their defects and yet trying to be fair." They say that most, if not all, of the genuine defects recently pointed out have been made the subject of remark, and many of them repeatedly, in the official reports. It is admitted that the main building at Kew is badly planned, the construction being so defective and the means of escape so deficient and badly placed that an outbreak of fire might lead to a dreadful catastrophe. As the result of continuous overcrowding rooms which are little better than wide corridors are used not only as sitting- and recreation-rooms but also have to serve as dining-rooms. Another result of overcrowding is that some of the wards are habitually too full and they are insufficient to allow of proper classification and separation of patients. Something might be done in the way of improvement by bringing into use spaces which are little or not at all occupied. Recommendations are made that at each asylum there should be a small detached building for the prompt isolation of infectious cases; that it might be advisable to leave all cell doors unlocked at night, as could easily be done with a sufficient increase in the number of night attendants, and that there should also be a system of electric tell-tale clocks. The visitors consider that something should be done at the earliest possible date to provide a suitable receiving house. Separate provision should be made without delay for patients whose friends are willing to pay for the accommodation. "There is no doubt," they say, "that there are now places clandestinely used as private lunatic asylums. In our opinion it would be better to supply good accommodation under State supervision than to license private establishments even under Government inspection." Another recommendation is that the superintendent of each asylum should be held responsible for all that takes place in his asylum. He should be under the direction of a board of management which should have complete control of the whole department. Such a board might consist of the Minister in charge of the department, the inspector, and a capable business man. They should have the services of a special architect not connected with the public works department. The visitors say that "the approaching retirement of the present inspector gives the department an opportunity of obtaining from without the State a new head who could regard the whole question of management from a fresh point of view." The final recommendation is that one of the metropolitan asylums should be converted into a strictly curative hospital. This would mean a great reduction in the number of inmates and of necessity the erection of other buildings elsewhere. It would be desirable, the report states, to bring from some place outside the State a new superintendent for this reorganised institution.

Protection of Illegitimate Children.

Dr. Mackellar of Sydney gave an interesting lecture on April 20th on the Protection of Neglected and Illegitimate Children in New South Wales. He gave a *résumé* of previous [illegible] and explained the provisions of the [illegible] ive Council last session by him- [illegible] Careful perusal of the official statistics showed that during the last ten years 25,034 illegitimate births had taken place in that State. The very uniformity of the figures for that period indicated that in the absence of remedial measures it was fairly certain that this tale of shame and misery would be repeated during the next similar period. What was the cause? Dr. Mackellar had no hesitation in affirming his belief that certainly one of the principal causes lay in the absence of a comprehensive and drastic law which should fix upon the father of an illegitimate child the whole responsibility for his action. The illegitimate birth-rate of Sydney was 10 per cent. of the whole birth rate and of the country districts it was something more than 5 per cent., the rate altogether for the colony being rather more than 7 per cent., which was a much larger percentage than existed in any of the adjoining States and a much larger percentage than that of the United Kingdom. Moreover, in New South Wales the birth-rate as a whole had decreased 33 per cent. since 1864, while the illegitimate birth-rate had nearly doubled in that period. On the other hand, the illegitimate death-rate was just 241 per cent. higher than the legitimate—a circumstance which told its own tale. The fact that in New Zealand the illegitimate rate was only 4·42 per cent. and in South Australia only 3·76 per cent.—about half that of New South Wales—was significant, inasmuch as those were the only two Australasian communities in which there were really effective affiliation laws. It was also necessary legally to prevent the employment of children in street-trading—a species of employment which Dr. Mackellar quoted the authority of the Comptroller-General of Prisons for saying was as pernicious in its effects on the moral and physical well-being of the children following it as the factory system at its worst, at least one-half of the criminality in the State being traceable in the first instance to truancy and street-trading. Added to that was the testimony of the superintendent of the Carpenterian Reformatory at Brush Farm that 80 per cent. of the children who were committed by magistrates to that institution were sent there because of crimes having their origin in the same manner.

May 8th.

Obituary.

JOHN BIRKBECK NEVINS, M.D. LOND., M.R.C.S. ENG.

THE recent death of Dr. J. B. Nevins of Liverpool has removed one of the most prominent medical personages in that city. At the age of 84 years he had outlived nearly all the colleagues of his earlier days. As an old pupil of his I can bear testimony to his influence and powers as a teacher, especially in the subjects of the early portion of the medical curriculum. As medical tutor at Guy's Hospital he had acquired the art of teaching practically and with accuracy. I believe Sir Samuel Wilks was one of his pupils there. His knowledge of medical botany and the materia medica was the best of its time, and he taught these subjects as they are seldom taught in these days. He was ever active and studious and his reading and occupations went far outside the field of medicine. His line of practice was general but he was specially interested in ophthalmic work. Had he followed medicine only he would have certainly become more widely known than he was. He probably dissipated his energies too much. His attitude and efforts towards the Contagious Diseases Acts brought him into conflict with the main body of the profession in later life and must have cost him much pain and obloquy. But this was a matter of conscience with him, and being a deeply religious man he felt keenly the nature of the provisions relating to the working of that measure. His warmest friends had to agree to differ from him and regretted that he spent so much labour in opposing the views of others who could not see eye to eye with him. To the last, when retired from active practice, his mind was engaged with literary work and all matters of scientific or antiquarian interest enlisted his attention. He was a sincere and kind friend, simple and unassuming, content to do his duty, and guided by a fervent Christian faith. Those who best knew him will longest cherish kindly memories of him.

D. D.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced :—Dr. Selikh Yanovich-Chainski, *privat-docent* of surgery in the Military Medical Academy of St. Petersburg.—Dr. Fernando Poló y Grijalbo, professor of midwifery and gynæcology in Saragossa.—Dr. Joseph de Smeth, formerly professor of psychiatry and of general pathology in the University of Brussels.—Dr. David Haussmann, a Berlin practitioner whose name is well known as a writer on various medical subjects mainly connected with the practice of midwifery.—Dr A. Dubler, formerly extraordinary professor of pathological histology in Basle, aged 46 years.—Dr. M. Huizinga, formerly professor of physiology in Groningen, where he succeeded Professor van Deen. His published works are mostly of a chemical nature.—Dr. Franz Saxer, prosector in the Leipsic Anatomical Institute, from an abscess in the brain due to a dissecting wound.

Medical News.

UNIVERSITY OF CAMBRIDGE.—The followin medical degrees were conferred on June 11th :—

M.D.—G. C. Garratt, Trinity.
M B.—H. Robinson, L. E. Wigram, and H. D. Ledward, Trinit J. A. Wood, St. John's; W. J. Susmann, Caius; F. H Park Pembroke; and W. W. Jeudwine, Selwyn Hostel
B.C.—H. Robinson, L. E Wigram, and G. W. Micklethwait, Trinit G. B. Norman, St. John's; and R. S. Drew, Pembroke.

The Professorship of Surgery, which has been suspend for the last five years, is declared vacant. The electi will take place during the Long Vacation. The electo are the Vice-Chancellor, Dr. L. Humphry, *Professor* Macalister, Sir M. Foster, Lord Lister, Dr. D. MacAlist Professor J. Chiene, C B., Professor T. Clifford Allbutt, a Mr. T. Holmes.—Dr. D. MacAlister, assessor to the Regi professor, has been appointed additional examiner Part I. of the third M.B. examination in pharmacology a general pathology.—Mr. J. O. Simpson, M.D. Edin., h been approved for the research degree of B.A. in virtue his dissertation, "On the Organisation of a Thrombus"

FOREIGN UNIVERSITY INTELLIGENCE.—*Basl* Dr. Albert Gassmann of Berne has been recognised as *priva* *docent* of Dermatology.—*Bonn:* Dr. Rudolf Rosemann Greifswald has been recognised as *privat-docent* of Phys logy.—*Budapest:* Dr. F. Reusz has been recognised *privat-docent* of Neurology.—*Clausenburg:* Dr. Leo Davi Professor of Descriptive Anatomy, has been ennobled recognition of his services to education.—*Kazan.* I Constantin Archangelski has been appointed to the ch of Pharmacology in succession to Dr. Dogiel. Dr. Savchen has been appointed professor of General Pathology *Leyden:* Dr. P. T. van der Hoeven of Amsterdam has be appointed to the chair of Midwifery and Gynæcology succession to Dr. Veit.—*Lyons:* Dr. Doyon has be promoted to be *professeur adjoint.*—*Marseilles:* Dr Alez has been appointed Professor of Anatomy.—*Moscow* K. A. Buinêvich has been recognised as *privat-docent* Medical Diagnosis.—*Naples:* Dr. Francesco Lastaria been recognised as *privat-docent* of Operative Medicine *New York Polyclinic:* Dr. J. A. Bodine has been pointed Professor of Surgery and Dr. Charles Kerley Professor of Pediatry.—*Odessa:* Dr. Khlopin Iurieff has been appointed to the chair of Hygiene *Rome:* Dr. Francesco Valagussa has been recognised *privat-docent* of Pediatry.—*Rostock:* Dr. Johannes Müll assistant in the Physiological Institute, has been recogni as *privat-docent* of Physiology.—*Tomsk:* Dr. Timofeiev Extraordinary Professor of General Pathology, has been moted to the Ordinary Professorship.—*Toulouse:* Dr. B has been appointed to the chair of Children's Diseases *Vienna:* Dr. W. Mitlacher has been recognised as *pri* *docent* in Pharmacology and Dr. Karl Strernberg as *pri* *docent* of Pathological Anatomy.

HOSPITAL FOR EPILEPSY AND PARALYSIS, MAI VALE: OPENING OF THE NEW BUILDINGS.—The new bu ings were opened on June 13th by Her Royal Highness Princess Louise (Duchess of Argyll), accompanied by Grace the Duke of Argyll. The Princess was recei by the President, the Earl of Hardwicke, the committ and the medical staff, who were then presented. Royal Highness was afterwards conducted to one the large wards, where about 200 invited guests w assembled. The President gave a short sketch of history of the hospital from its foundation in 1866 new buildings, which with the exception of about third of the front façade are now complete, afford am accommodation for 40 beds out of the 60 which the compl building will eventually contain. The out-patient dep ment is separated by a corridor from the main building is complete in every respect. Mr. Knapp-Fisher, a mem of the committee, further supplemented the remarks of President and gave interesting details of how the neces funds for the building were obtained and what furt funds would be required to complete the building to pay working expenses. After the Princess had decla the building open the Lord Bishop of London held a sh service. The Rev. Canon Duckworth, one of the Vi Presidents, was called on to propose a vote of thanks to Princess, which was seconded by Dr. George Ogilvie, [illegible] explained that the hospital was a [illegible] of diseases of the nervous [illegible] patients came not from the immediate neighbourhood but from greater London and its outlying districts. Many also came from the provinces, Scotland, and even Ireland, so that the area from which the patients were recruited was a very large one The medical staff had therefore great opportunities for studying nervous diseases and while trying to do something to add to human knowledge and to the relief of human suffering they never forget that, "si c'est la curiosité des maladies qui fait le savant, c'est l'amour des malades qui fait le médecin." The Duke of Argyll then rose and returned thanks for the Princess in a short and humorous speech. "Prosperity to the Hospital" was proposed by the Mayor of Marylebone and seconded by Sir Henry Burdett. The inspection of the hospital then followed, when the Princess was taken over the building by the matron, Miss Oldham, the secretary, Mr. Howgrave Graham, and the architect, Mr. Keith Young.

FREEMASONRY. — *The William Harvey Royal Arch Chapter.*—On June 4th, at the Criterion Restaurant, London, this chapter was consecrated by Sir Edward Letchworth, assisted by other grand officers. It gathers its members from the various hospital lodges and judging from the successful nature of its initiation is likely to prove a great success. The three principal officers appointed were Mr. C. Vincent Cotterell, L.D.S., Mr. W. J. Walsham, F.R.C.S., and Mr. J. Ernest Lane, F.R.C.S Medical Freemasons belonging to the hospital lodges can obtain further particulars from Dr. R J. Probyn Williams, 13 Welbeck-street, W. —*[illegible]e Reine Lodge, No 2853.*—The [illegible]dge was held at the Trocadéro [illegible] 2nd. W. Bro. Amand Routh, M.D., was installed as W.M. and invested the following officers: W. Bro. John Abercrombie, M.D., as I.P.M.; Bro. [illegible] ; Bro. Victor Corbould, J.W.; [illegible], J.G.D., Chaplain; W. Bro. [illegible], P G.D., Treasurer; W. Bro Arthur E. Reade, P.M., Secretary; Bro. Jack Humphreys, S.D.; Bro. Peter Daniel, F.R.C.S., J.D.; R W. Bro. Robert Grey, P.G.W., Dir. Cer.; Bro. Victor Partridge, I G.; Bro. Hewitt Oliver and W. Bro. Francis Mellersh, P.M., Stewards. W. Bro. John Abercrombie, I.P.M., was presented with the P.M. jewel voted to him by the brethren of the lodge as a mark of their esteem and regard.

COMMEMORATION DAY AT LIVINGSTONE COLLEGE. —The commemoration day proceedings at Livingstone College took place at Leyton on June 10th. The Bishop of St. Albans presided and there were present Sir T. Fowell Buxton, Mr. T. F. Buxton, Mr. R. L. Barclay (treasurer of the College), Mrs. Bishop, Rev. J. T. Inskip (vicar of Leyton), and a number of medical men and ministers of various denominations. The Bishop of St Albans, in the course of an interesting address, said that he came there with very great pleasure to say a few words on that most interesting occasion of this commemoration. He could not help adverting first of all to the name of that college. It was a great thing to have an inspiring name and he believed that the name of Livingstone would be a perpetual inspiration. He could not but think that those who came to the college as students before going out to mission work in various parts of the world would remember and retain the permanent influence of that inspiring name. There were many advantages attached to the work of the college, one special one being the help and assistance which it gave to the missionaries in the preservation of their own health and strength in the work to which they were called. This was a feature of the college which deserved, he ventured to think, special attention. There could be little doubt that the average life of a man abroad was considerably extended when due care was taken to observe the rules of health. He had himself noticed when in India some years ago that the young soldiers who came out there and led reckless and careless lives died very soon whilst others who took ordinary care of themselves lived much longer. He had spoken to the army medical officers often on the subject, and they had told him that if the young soldier would only take real care of himself he might live in India almost as well as anywhere else. What applied to the young soldier applied also to every other Englishman living in the tropics. He was convinced that that college, which was based upon he principle that no missionary should proceed to the foreign field wit[illegible] and of the la[illegible] who realised [illegible] the missionaries who went to work abroad, and who realised further the immense advantage that was placed in the hands of those men and women who left our shores to carry the Gospel abroad and who were able to follow the Master not only in the teaching they gave to the souls but in the care they gave to the healing of the body. He was thankful that so many missionary societies had realised the value of that work and he was quite convinced that when it was thoroughly known it would receive large and munificent support.

VACCINATION GRANTS.—Mr. G. Shepley Page, public vaccinator for the Bristol district of the Bristol union, and Mr. E. J. Sheppard, public vaccinator for the Clifton district of the Bristol union, have been awarded the Local Government Board grant for successful vaccination.

GUIDES TO DEAL, FALMOUTH, AND TENBY.—For the convenience of visitors to these health resorts the town councils of the places mentioned have issued illustrated guides which can be obtained gratis by sending a post-card to the town clerks. Each guide consists of about 60 pages, printed in good type, and contains much historical information relating to places of interest. Details of excursions are also given, together with the cost of travelling, and recreations and amusements of various kinds are described. The books, which are published by the Health Resorts Development Association of St. Bride-street, Ludgate-circus, London, E C., should be useful in settling the question, "Where shall we go for a holiday?"

COMPLAINT AGAINST A PUBLIC VACCINATOR.—At the meeting of the Chippenham board of guardians held on June 8th a letter was received from the Local Government Board stating that its inspector in his report of his recent inspection of public vaccination in the Chippenham union said that the public vaccinator of Sutton Benger had as public vaccinator continued to neglect his duties, notwithstanding his written undertaking, dated March 27th, 1902, that he would in future carry out his duties in strict compliance with the requirements of the Vaccination Act. The guardians, after some discussion, eventually decided to send a copy of the letter to the public vaccinator and to ask for his observations on the same.

ORAL INSTRUCTION OF THE DEAF AND DUMB.—Earl Carrington presided at a dinner at the Hotel Cecil, on June 11th, in aid of the funds of the Association for the Oral Instruction of the Deaf and Dumb, Fitzroy-square. After the loyal toasts the chairman proposed the toast of the evening, "Prosperity to the Association," and in doing so he traced its history from the commencement. He described the visit that he had paid to the training college and practising school in Fitzroy-square and advised those present to do likewise. He referred to the work of the Royal Commission and the subsequent passing of the Elementary (Deaf and Blind) Act, 1893, and the great action the association had taken in the training of teachers for public bodies and the spread of the pure oral system. Other speakers followed and Lord Crewe proposed "The Chairman," and in doing so remarked that the association was now a national institution and ought to be supported by the public at large. The director, Mr. William Van Praagh, announced donations to the amount of £3400, including £20 from His Royal Highness the Prince of Wales.

Parliamentary Intelligence.

HOUSE OF COMMONS.

THURSDAY, JUNE 11TH.

Emigrants' Lodging-houses in Liverpool

MR. WEIR asked the President of the Local Government Board whether his attention had been directed to a petition signed by 125 residents and ratepayers of Great George-square, Liverpool, complaining that out of 34 houses in the square no fewer than 11 were used as common emigrant lodging houses; whether he was aware that these houses were frequented by Italians, Russian Finns, Polish Jews, Galicians, and Scandinavians, and were frequently so overcrowded as to constitute a source of danger to the public health, and that one house was found on March 25th last to contain 26 persons in excess of the licensed number and another 21 in excess; and, if so, whether he would consider the expediency of having

these facts brought under the notice of the Commission on Alien Immigration and the corporation of Liverpool, by whom these houses were let on lease.—Mr. LONG replied: The hon. Member has given me an opportunity of seeing this petition and I have communicated with the corporation on the subject. I am informed that there is no foundation for the suggestion that certain houses are frequently so overcrowded as to constitute a danger to the public health, but as I stated on
taken by the corporation in respect o
houses on March 25th last. I see no
matter before the Royal Commission on
stand that evidence has already been g
pool medical officer of health. I am informed that in all cases where complaints are made by residents in the square of emigrants' lodging-houses being a nuisance, the corporation makes inquiry and uses every endeavour to insure that the premises are used in accordance with the conditions of the lease or of any license which may have been granted by the corporation to any lessee allowing the premises to be used otherwise than as a private dwelling house.

Plague in India.

Mr. WEIR asked the Secretary of State for India whether he would state the number of persons in each province of India who had been inoculated with plague serum since this system was introduced and whether he would say how many of these persons had since died from plague.—Lord GEORGE HAMILTON replied: The returns, so far as they are available, are given in the subjoined statement:—

	Number of persons inoculated.	Number of persons inoculated who have since died from plague.
Madras	21,404	Not known.
Bengal	34,332	31
United Provinces	8,538	26
Punjab	480,737	1,158
Central Provinces	10,649	34
Coorg	3	0
Berar	2,407	9
Bombay	599,857	1,482

The Sewage Question at Walmer.

Mr. HARWOOD asked the Secretary to the Admiralty whether, seeing that the sewage from the marine barracks and hospital at Walmer is discharged crude into the sea immediately opposite the town, he would explain why the Admiralty had declined to join the authorities of the town in establishing a system of treatment for this sewage.—Mr. PRETYMAN replied: The Admiralty has not declined to join the local authorities in establishing an improved sewage system. It has for a long time past been urging them to establish such a system.

The Affairs of the Local Government Board.

The House went into Committee of Supply and on the vote for the Local Government Board for England discussed the affairs of that department.

SIR WALTER FOSTER raised the question of death certification and the need for legislation in this connexion. So loose, he said, were the law and its administration that crime constantly escaped detection. The select committee of the House of Commons of 1893 was forced to the conclusion that vastly more deaths occurred from foul play and criminal neglect than the law disco

Local Government Board whether registrars throughout the country had been warned to accept certificates only on the prescribed form so as to check the acceptance of the loose forms often sent in to notify deaths; whether any steps had been taken to induce registrars to refer uncertified deaths to the coroner; whether any steps had been taken to carry out the recommendations of the committee that in the case of uncertified deaths an abstract of the evidence at the coroner's inquest should be submitted to the registrar-general; and, lastly, what steps the right hon. gentleman, or his department, had taken to encourage local authorities to carry out local inquiries into the cause of death in all uncertified cases in their area, as was done at Manchester, Glasgow, and Edinburgh.

Dr. FARQUHARSON also spoke in favour of the amendment of the law with regard to death certification and insisted that the Local Government Board was bo rpaid.

Mr. FLOWER con aggregating large numbers
of Poor-law child where they could not be
properly supervised disease were inevitable.

Mr. CROOKS, M GORST, and several other
Members joined in

Mr. CHANNING complained of the scale of fees and charges for the administration of the Vaccination Acts, insisting that they were far too high. Before the order and circular of 1898 the cost of administration by the guardians was £72,625, but since the Act of that year the cost had been raised to £237,000. This heavy cost was felt as a grievance
in many parts of the co accination
officers were placed in an ing under
the guardians and at the from the
Local Government Boar defy the
guardians. He drew attention to the case of the Wellingborough board of guardians and their administration of the Vaccination Acts, pointing out that the total of costs incurred by vaccination officers and solicitors in 18 months amounted to £431. Up to the present time the costs had amounted to £583, or a rate equal to ¾d. in the pound throughout the district. It was a serious state of things that a vaccination officer should be er whom he
served and to impose any ratepayers.

Mr. WALTER LONG, Pre Board, said that in the case to which Mr. Channing had referred there was no doubt that the vaccination officer did incur unnecessary expense in taking legal advice whe ave dispensed with it,
but he would remind tl when this officer was
appointed he found an s of work and since he
had been in office he had done his work very well. The worst that could be alleged against him was that he had not sufficient confidence n himself. The matter, however, was to form the subject of local inquiry and therefore he would say nothing more about it now except that he had seen nothing in the case to justify him in removing officer from his position though he had indicated to him the way in which he thought he might do his work, not less successfully but at less cost to the guardians. With regard to the question of death certification he entirely agreed that it was a subject with which it would be well to deal if it were possible. He did not think the facts were quite so alarming as the hon. gentleman the Member for Ilkeston (Sir Walter Foster) would have the committee believe; but none the less the subject was a very serious one. The difficulties of dealing with the question were of a serious and practical character. The practical difficulty was that if the proposals of the Bill which was prepared in 1894 were enforced, not only would very considerable additional expense be incurred but also very considerable difficulties would probably result in the indefinite and altogether undesirable postponement of burial. The matter, however, had been engaging his attention and if he saw his way to an amendment of the law which would be practicable and would carry out what they all desired, the hon. gentleman might rely upon it that he would not fail to do his best to carry it through. As to boarding out pauper children, he confessed that he thought the barrack system had been a little hardly dealt with, but it was too late to take that view now. They were tried and were condemned, and in the case of the great Sutton schools had already been broken up. When the guardians now made proposals in dealing with their children the department never lost an opportunity of recommending them to adopt the cottage home or the boarding-out system. But the guardians were in possession of the facts of the case as well as the department and it was for them to make proposals. If those proposals appeared to depart from the principles that had been laid down the department insisted on their alteration.

Mr. KEARLEY then spoke of the administration of the Food Adulteration Acts. The figures furnished by the return of the Local G the surest way of getting effic
to insist upon the local authorit
That was the only possible way
ge of adulteration. The Acts were workin
plenty of room for improvement. He wished
to the adulteration of milk in London. T
Local showed that in London the adult
tion o The average percentage of adulte
tion o owns, excluding London, was 8·5
cent.; in the wh 15·2 per cent. In the
of London the found in the number
samples taken w ras, 34 per cent.; in Sh
ditch, 30 per cent.; and in Hackney about 36 per cent. In Manche
where the Acts had been properly administered for some years,
percentage of adulteration of milk was only 3½ per cent. That sho
what could be done by efficient administration of the Acts. The L
Government Board should appoint special inspectors to put an en
this adulteration of milk in London. If prosecution alone did not su
imprisonment should be made to follow.

Mr. PARTINGTON advocated a reduction in the medical charges
vaccination and recommended that the Local Government Board sho
supply lymph to all medical practitioners who require it.

Mr. SOARES thought that Government lymph should be supplied
private as well as public vaccinators.

Mr. SPEAR thought that on the occasion of an epidemic of small
public stations for revaccination shou

Mr. WALTER LONG said with regard
that he had been at some pains to try
of the question. There had been considerable communication
medical men on the one hand and local authorities on the other,
he had not been able to arrive at a conclusion which would justify l
in proceeding to an alteration at once. He had thought it best to
a report from a small departmental committee, after which he
posed to decide definitely what should be done. As to the suppl
lymph, he could not hold out any hope of being able to pro
lymph to private practitioners. It had to be remembered t
public vaccinators obtained their lymph for primary vacc
tion free of charge and during the recent epidemic of sm
pox the Board was able to supply them not only with
lymph for primary vaccination but also with a large propor
of what was required for seconda The dem
that the lymph should be supplied als
a very natural one but he doubted
There was the Jenner Institute in London which made
ments for the supply of lymph quite as good in quality
character as that supplied by the Government. In addition
that there were growing up over the country great laboratories
which all sorts of admirable scientific work was being car
on and in which, among other things, they were producing ly
which probably would be as good as any produced by the Governm
There was by ordinary mercantile fi
During the he made every inquiry to
whether th r the idea that this ordin
thoroughly satisfactory character bu
e majority of it could not be re
ctory in all respects. To under
supply of lymph at a certain p
he Government lymph establishm
people who had entered upon
manufacture as part of their business. Moreover, it was quite c
ceivable that at times of gr departm
would not be able to suppl was
would be a breakdown. By h wh
yet fully developed it might be possible
would not have to be destroyed if kept beyond a certain ti
but at present the real difficulty with which they had to cont
was the fact that lymph could not be produced during
slack time and put in reserve for use when the pressure ca
He quite realised the force of the demand and he was not making
statement without having carefully considered and discussed
question, not only with his own medical advisers but also with
tinguished medical men outside the department. Among those
were best qualified to judge it was agreed that it was better to c
tinue the present system than to put the whole supply of lymph i
the hands with regard to the administratio
the Adult prejudicial than to
the local Government Board

[illegible] bear the expense. When the
[illegible] as it ought the department
[illegible] nce of taking samples and
[illegible] e Act had not been long on
[illegible] luced good results, and as far
[illegible] ion of the Local Government
[illegible] reminded of, and kept up to, their duties.

FRIDAY, JUNE 12TH.

Vaccination Prosecutions.

Mr. SEYMOUR ORMSBY-GORE asked the President of the Local Government Board whether his attention had been drawn to the fact that [illegible]

As regards the last part of [illegible]
steps in the matter. It ha[illegible] that a
vaccination officer is empo[illegible] ie kind
referred to notwithstanding [illegible] not to
prosecute.

MONDAY, JUNE 15TH.

Professor E. A. Schäfer's Experiments.

Mr. PERKS asked the Home Secretary whether, as reported at a [illegible] committee of the Royal Medical and Chirurgical
[illegible] Schäfer had obtained permission to conduct
[illegible] without anæsthetics for the purpose of inves-
[illegible] ena of dea[illegible] whether he was
[illegible] periments [illegible] under
[illegible] hether he [illegible] the
[illegible] which th[illegible] ve —
[illegible] replied: [illegible] the
[illegible] by the Ac[illegible] rtain
experiments on dogs for the [illegible] the
phenomena of death from drow[illegible] cting
resuscitation in cases of ap[illegible] nents
will be performed on behalf of the Royal Medical and Chirurgical
[illegible]
allowing the experiments.

Tuberculosis Commission.

Dr. FARQUHARSON asked the President of the Local Government [illegible]

Imported Milk.

[illegible] asked the Secretary to the Treasury whether [illegible]

[illegible] supply of information to persons making inquiry about the business of others.

TUESDAY, JUNE 16TH.

Lunacy in Ireland.

[illegible] Lord Lieutenant
[illegible] going into the
[illegible] iliary asylums,
[illegible] nd the accom
[illegible] r, if an inquiry
[illegible] the Workhouse
[illegible] desired accurate
[illegible] ectors
[illegible] eld —
[illegible] classi-
fication and treatment of the insane who are relieved from the poor-rates in workhouses but will not investigate the question of the [illegible] asylums, nor will
[illegible] In reply
[illegible] ave passed
[illegible] he subject

Poor-law Medical Officers in Ireland.

Dr. THOMPSON asked the Chief Secretary to the Lord Lieutenant of Ireland whether, in view of the dissatisfaction existing among the Irish Poor-law medical officers, he would consent to appoint in the near future a Royal Commission to inquire into the working of the Irish Poor-law [illegible] The Commission
[illegible] e amalgama-
[illegible] administra-
[illegible] constituting
[illegible] have been
limited in their scope with a view to the completion of the necessary inquiries in the shortest possible time and to the avoidance of matters which are regarded as contentious. As at present advised I am not prepared to recommend the appointment of a commission to investigate the larger question of the working of the Poor-law system in all its branches.

Sewage Treatment.

Sir JOHN BATTY TUKE ROLLESTON asked the Home Secretary whether his attention had been called to explosions of septic tanks at Exeter during the experimental stages, at Walton-on-the-Naze in December last, and at Sheringham in Norfolk on May 1st last, the last of which caused the death of three people and injuries to several others; and if so whether in view of the number of septic tanks which had lately been erected throughout the country he would consider the [illegible] a special licence.—
[illegible] asked me to answer
[illegible] ion at Sheringham
[illegible] two cases referred
[illegible] at present investi-
[illegible] disposal of sewage,
[illegible] as caused special
[illegible]
the report of the Commission before [illegible]
tion should be undertaken on the subject.

WEDNESDAY, JUNE 17TH.

Tuberculosis Commission.

Mr LONG, in reply to Mr. FIELD, said that no report had been issued by the Royal Commission on Tuberculosis either to officials or otherwise

BOOKS, ETC., RECEIVED.

APPLETON, D., AND CO., 25, Bedford-street, Covent-garden, W.C.
D[illegible]

BAILLIÈRE, J. B., ET FILS, 19, Rue Hautefeuille, Paris.
Le Traitement de la Constipation. Par le Dr. Froussard, Ancien Interne des Hôpitaux de Paris. Préface par le Dr. Maurice Soupault, Médecin des Hôpitaux de Paris. Price 1 fr. 50.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent-garden, W.C.
Protozoa and Disease. By J. Jackson Clarke, M.B. Lond., author of "Surgical Pathology and Principles," &c. Part I. Price 7s. 6d. net.
Manual of Medicine. By Thomas Kirkpatrick Monro, M.A., M.D., Fellow of, and Examiner to, the Faculty of Physicians and Surgeons, Glasgow. Price 15s. net.

[illegible] Marlborough-street, W.
[illegible] orts. New Series. Edited by Dr.
[illegible] Battle. Vol. XXX. Price 8s. 6d.
[illegible] of Foods and Drugs. By Henry
George Greenish, F.I.C., F.L.S., Professor of Pharmaceutics to [illegible] Price 10s. 6d. net.
D[illegible]. By Alexander
[illegible] he Metropolitan
[illegible] n and Women.
A[illegible] of Beri beri. By
[illegible] e Institute for
[illegible] Vol. II., No. 1.
[illegible] F.M.S. Price
3s net.
An English Handbook to the Paris Medical School. By A. A. Warden, M.D., Visiting Physician to the Hertford British Hospital, Paris. With Prefatory Letters by Lord Lister and Prof. W. W. Keen. Price 2s. net.
On Syphonage and Hydraulic Pressure in the Large Intestine, with their Bearing upon the Treatment of Constipation, Appendicitis, &c. By Ralph Winnington Leftwich, M.D., Late Assistant Physician to the East London Children's Hospital. Price 3s. net.

[illegible] 14, Fleet street, E.C.
[illegible] By Florence Lessels Mather, Health
[illegible] and County Council. Price 1s.

DEUTICKE, FRANZ, Leipzig und Wien
12,000 Fälle von Haut und Geschlechts-Krankheiten. Erstattet von Dr. Karl Pezzoli und Dr. Alexander Porges, Hilfsärzten des Ambulatoriums. Price M.3.
Die Krankheiten des Rachens. Von Prof. Dr. Ottokar Chiari. [illegible] Kehlkopf und Nasenkrankheiten an der [illegible] M.2.
D[illegible] und der Luftröhre. Von Dr.
[illegible] r Universität München. Zweite
[illegible] d vermehrte Auflage. Price M.7.

FISCHER, GUSTAV, Jena.
Die Krankheiten der Warmen Länder. Von Dr. B. Scheube, Fürstl. Physikus und Medizinal Rat in Greiz, Früherem Professor an der Medizinschule in Kioto (Japan). Dritte umgearbeitete Auflage. Price M.15; geb. M 16.

GREEN, WILLIAM, AND SONS, Edinburgh.
Encyclopædia Medica. Under the General Editorship of Chalmers Watson, M.B., F.R.C.P.E. Volume xiii. Ulceration to Zinc Poisoning. Price not stated.

Practical Handbook of the Diseases of the Eye. By D. Chalmers Watson, M.B., F.R.C.P.E., Ophthalmic Physician, Marshall-street Dispensary, Edinburgh. Price not stated.

[illegible] . 68, Berlin; N.W.

[illegible] Bedeutung für die Nieren- [illegible] in. Price M.3.

[illegible] Von Dr. Eduard Henoch, in Berlin. Elfte Auflage. Price M.17.

Die Rekto Romanoskopie auf Anatomisch-physiologischer Grundlage. Von Professor Dr. Julius Schreiber, Direktor der Königl. medizinischen Universitäts-Poliklinik zu Königsberg i.P. Price M.8.

HODDER AND STOUGHTON, 27, Paternoster-row, E.C.

The Religious Sense in its Scientific Aspect. By Greville Macdonald, M.D. Price 3*s.* 6*d.*

KARGER, S., Karlstrasse, 15, Berlin.

Jahrbuch fur Kinderheilkunde und Physische Erziehung. Unter Redaction von O. Heubner, A. Steffen, Th. Escherich, 57, der dritten Folge 7 Band. Heft 6. Ausgegeben am 1 Juni, 1903. Preis des Jahrgangs (zwei Bände) beträgt Mk. 36.

KIMPTON, HENRY, 13, Furnival-street, E.C.

The Physiological Nursery Chart. Designed by Eric Pritchard, M.A., M.D. Oxon., M.R.C.P. Lond. Price 1*s.* 1*d.* post free.

LONGMANS, GREEN, AND Co., 39, Paternoster-row, E.C.

My Relations with Carlyle. By James Anthony Froude. Price 2*s.* net.

MATTHEWS, JOHN, 93 and 94, Chancery-lane, W.C.

Matthews' American Armoury and Blue Book Edited by Mr. John Matthews (Member of the Pennsylvania Historical Society, Philadelphia, U.S.A.). Price £2 2*s.* net.

OFFICINA TYPOGRAPHICA, 7, Calçada do Cabra, Lisbon.

Doença do Somno Trabalhos executados até 6 de Agosto de 1902 pela Missão enviada a Angola pelo Exmo. Ministro da Marinha. Composta de Annibal Bettencourt (Chefe da Missão). Ayres Kopke, José Gomes de Rezende Junior, Annibal Correia Mendes. Price not stated.

OSBORNE, GARRETT, AND Co., 51 and 52, Frith-street, Soho, W.

A Handbook of "Chiropody." By Felix Wagner, Chiropodist. Price not stated.

PEARSON, C. ARTHUR, Limited, Henrietta-street, W.C.

The Mother's Guide to the Care of Children in Sickness and Health. By Lydia Leney, M.D., Oculist to the London School Board. Clinical Assistant to the New Hospital for Women and Children. Price 3*s.* 6*d.*

REBMAN, LIMITED, 129, Shaftesbury-avenue, W.C.

A Practical Guide to Disinfection. By M. J. Rosenau, M.D., Director of the Hygienic [illegible] Surgeon U.S. Marine Hospi[illegible] a Supplement by Francis [illegible] Camb., Medical Officer of [illegible] Price 10*s.* 6*d.* net.

A Model Sanatorium for the Treatment of Pulmonary Tuberculosis. *An Essay submitted in the Competition for the Erection* of a Sanatorium for Tuberculosis. By Alexander G. R. Foulerton, F.R.C.S., D.P.H., Cambridge, with whom is associated, as Architect, R. Langton Cole, F.R.I.B.A., London. Reprinted from *Public Health*, March, 1903. Price not stated.

High-frequency Currents in the Treatment of Some Diseases. By Chisholm Williams, F.R.C.S. Edin. Price 10*s.* 6*d.* net.

Medical Microscopy. By T. E. Oertel, M D., Professor of Histology, Pathology, Bacteriology, and Clinical Microscopy, Medical Department, University of Georgia. Price 9*s.* net.

A Text-book of Pharmacology and Therapeutics, or the Action of Drugs in Health and Disease. By Arthur R. Cushny, M.A., M.D. Aberd., Professor of Materia Medica and Therapeutics in [illegible] ugan. Third Edition, revised and [illegible] t.

[illegible] oducts. *By H. W. Conn, Ph.D., Pro-* [illegible] University. Price 6*s.* net.

[illegible] f Malarial Diseases. By Dr. Reinhold [illegible] man Navy Translated by P. Edgar, [illegible] Surgeon, Teluk Anson, F.M.S., and [illegible] M R C.S., L.R C.P. Price 9*s.* net.

Progressive Medicine. Edited by Hobart Amory Hare, M D., assisted by H R. M. Landis, M.D. Volume I., March, 1903. Price 15*s.* net per volume.

A System of Psychologic Therapeutics. Edited by Solomon Solis Cohen, A.M., M.D. Volume X.: Pneumotherapy, including Aerotherapy and Inhalation Methods and Therapy. By Dr. Paul Louis Tissier, one-time Interne of the Paris Hospitals. Price 12*s.* 6*d.* net.

Cellular Toxins, or the Chemical Factors in the Causation of *Disease. By Victor C. Vaughan, M.D., LL.D., Professor* of Hygiene and Physiological Chemistry and Director of the Hygienic Laboratory in the University of Michigan, and Frederick G. Novy, M.D., Sc.D., Junior Professor of Hygiene and Physiological Chemistry in the University of Michigan. Fourth edition, revised and enlarged. Price 14*s.* net.

SIMPKIN, MARSHALL, HAMILTON, KENT, AND Co., LTD., London.

Indian Medical Service, Past and Present. By Surgeon-General W. B. Beatson, M.D., M.R.A.S., F.R.C.P. Lond. (late Deputy Surgeon-General, Lahore Division). Second edition, revised and supplemented. Price not stated.

SPRINGER, JULIUS, Monbijouplatz, 3, Berlin, N.

Die Krankheiten der oberen Luftwege. Von Prof. Dr. Moritz Schmidt. Dritte, sehr vermehrte und verbesserte Auflage. Price M.18.-

THACKER AND COMPANY, Limited, Bombay.

Legal Medicine (in India) and Toxicology. Illustrative cases. By Major Collis Barry, I.M.S., F.R.S.E., F.I C., &c., Chemical Analyser to the Government of Bombay. Volume II. Price not stated.

URBAN UND SCHWARZENBERG, Berlin and Vienna.

Handbuch der Allgemeinen and Lokalen Anæsthesie. Von Prof. Dr. F. L. Dumont, Oberarzt des Diakonissenhauses Bern. Price M.7.-

VIGOT FRÈRES, 23, Place de l'Ecole de Médecine, Paris.

Traité des Ur[illegible] érée comme un des Eléments d[illegible] ard, Professeur à la Faculté de [illegible] Price 7 francs

VOGEL UND KREIENBRINK, Dessauerstrasse, 25, Berlin, S.W.

Parasitäre Krebsforschung und der Nachweis der Krebsparasiten am Lebenden. Von Prof. Dr. Max Schüller in Berlin. (Abhandlungen aus dem Gebiete der Krebsforschung, herausgegeben von Prof. Dr. M. Schüller, Berlin.) Price M.2.

WILEY, JOHN, AND SONS, New York. (Chapman and Hall, Ltd., London.

A Text-book of Organic Chemistry. By Dr. A. F. Holleman, Professor Ordinarius in the University of Groningen, Netherlands. Translated from the Second Dutch Edition by A. Jamieson Walker, P[illegible] ment of Chemistr[illegible] England, assisted by [illegible] coöperation of the a[illegible]

WRIGHT, JOHN, AND Co., Bristol.

Eye Symptoms as Aids in Diagnosis. By Edward Magennis, M.B., D.P.H., late Clinical Assistant at the Royal London Ophthalmic Hospital. Price 2*s.* net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ANDREWS, HENRY RUSSELL, M.D., B S. Lond., M.R.C.P. Lond., has been appointed Assistant Obstetric Physician to the London Hospital.

BEATTIE, R., M D., M.S. Q.U.I., has been appointed Medical Officer of Health for Dewsbury Corporation.

BRADFORD, J. R., M.D. Lond., has been appointed Professor of Medicine at University College, London, vice Dr. Poore.

COOK, J. B., M.B., [illegible] Surgeon to the Royal Alexa[illegible]

CRISP, JAMES ELLIS [illegible] appointed Medical Officer [illegible] n Board of Guardians.

DAVIS, HENRY, M.R.C.S., has been appointed Anæsthetist to the French Hospital.

FLETCHER, R. BRENNAND, M.B., Ch.B. Vict., has been appointed Resident Medical Officer to St. Mary's [illegible]

GRIFFITH, W. STARBUCK, M.B., C.M. Edin [illegible] Medical Charge of Troops at South [illegible] South Wales.

HARRIS, JOHN HENRY, M.D. Durh., M.R.C.S., L.S.A., D.P.H. Camb., has been appointed Medical Officer of Health for Dartmouth.

HOLCROFT, WILLIAM FRANCIS LUCIUS AUSTIN, M.B., B Ch. Edin, has been appointed Medical Officer of Health for the Wolland District for three years by the Southmolton (Devon) Board of Guardians.

KELLOCK, THOMAS H., M.B., B.S. Cantab., F.R.C.S. Eng, has been elected a Surgeon to the Hospital for Sick Children, Great Ormond-street.

LYLE, H. WILLOUGHBY, M.D., B.S. Lond., F.R.C.S. Eng., has been appointed Honorary Assistant Surgeon to the Royal Eye Hospital, Southwark.

MENDES, THOMAS A., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Second Assistant Medical Officer at the County and City Asylum, Hereford.

POORE, G. V., M D. Lond., has been [illegible] Emeritus Professor of Medicine and Clinical Medicine at [illegible]

ROCHE, ANTONY, M.R.C P., L R.C.S. I [illegible] on Hygiene to the Department of Technical Education and Agriculture for Ireland.

THORP, W., M.B., B S. Lond., has been appointed House Surgeon to the Kettering and District General Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ARMY MEDICAL SERVICE.—Examination of Candidates for not less than 30 Commissions in the Royal Army Medical Corps.

AYLESBURY, ROYAL BUCKINGHAMSHIRE HOSPITAL.—Resident Surgeon, unmarried. Salary £80, rising to £100, with board and apartments.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Male House Surgeon. Salary £80 per annum, with board and washing.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Surgical Officer. Salary £60 per annum, rising to £80 in three months, with board, washing, and attendance.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant for three months. Fee £5 5*s.* and £3 3*s.* for one and two attendances per week respectively.

DUDLEY GUEST HOSPITAL.—Assistant House Surgeon, for six months. Salary £40 per annum, with residence, board, and washing.

Assistants.

[illegible]ARDIANS OF THE POOR OF ST. MARY, ISLINGTON.—Medical Officer and Public Vaccinator for No. 1 District. Salary £100 per annum, with fees.

[illegible]SPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians for six months. Honorarium of £25.

[illegible]L, Ryde.—Resident House Surgeon.

[illegible] London, W.C.—Honorary Assistant

[illegible]LDREN'S HOSPITAL.—Vacancy on the

[illegible] unmarried.

[illegible] Salary

[illegible] Salary £80,

[illegible]al Assistant.

[illegible] Physiology.

[illegible] road, N.W.— [illegible] Salary at rate

[illegible]YAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

[illegible] with board, residence, and laundry.

[illegible]AMEN'S HOSPITAL SOCIETY ("DREADNOUGHT"), Greenwich, S.E.—House Physician. Salary £65 per annum, with board, residence, [illegible]

[illegible]nt House Surgeon for six [illegible]nnum, with board, washing,

[illegible]HIRE INFIRMARY AND EYE [illegible]n. Salary £100 per annum,

[illegible] Medical Officer.

[illegible]—Resident Junior House [illegible]th board, lodging, washing,

[illegible]E NERVOUS SYSTEM, &c., 73, [illegible]r. Honorarium 50 guineas per annum.

[illegible] Broad Sanctuary, S.W.—Administrator of [illegible]rium of £25 per annum.

[illegible] EDWARD INFIRMARY AND DISPENSARY.—[illegible] Salary £100, with board, apartments, and

[illegible]TAFFORDSHIRE GENERAL HOSPITAL.—House [illegible]0 per annum, with board, lodging, and washing.

[illegible]RK DISPENSARY.—Resident Medical Officer, unmarried. Salary £120 a year, with board, lodging, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

[illegible] place, W., the wife of S.

[illegible] wife of F. H. de Graves

[illegible] of G. Nicol

[illegible] the wife of [illegible] daughter. [illegible].S., of 133,

MARRIAGES.

[illegible]UNCAN—SWAFFIELD.—On June 9th, at Sevenoaks, Robert William [illegible] daughter of

[illegible], Stoke [illegible] Norman, [illegible] the late [illegible]ghter of [illegible] Lodge, [illegible] Mrs. J.

[illegible] at Christ Church, Stockport, [illegible] to Helen, daughter of Edwin [illegible]

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

[illegible] to Correspondents.

THE NOTTINGHAM CHILDREN'S HOSPITAL.

To the Editors of THE LANCET.

SIRS,—May I be permitted to call your attention to the unfairness of the comment in THE LANCET *of May 9th (p. 1347) referring to* [illegible] March 7th last [illegible] that matters [illegible] to be in a very [illegible] intendent was adversely commented on. The facts upon which you based your opinion and comment were very fully set out, from a perfectly fair desire on your part not to express an opinion apparently unsupported by fact, and further, no doubt, to give the lady superintendent an opportunity of explaining, if she could, the facts stated, in a manner which would justify her conduct in your opinion, and in the opinion *of your readers, or of giving in a public manner her version of the* matter in order that both sides of the question might be before the public and possibly further commented on by yourselves. The article was stated to be written upon information given by me, and I quite expected that an attempt would be made in your columns on behalf of Miss du Cane to give a satisfactory explanation of her action; and I am still prepared, and indeed anxious, that this matter should receive as much public attention as possible. But in your issue of May 9th you are really unfair to me. You state in a very short note that having heard the statement of the lady superintendent on the matter you are satisfied that you unintentionally did her an injustice and that she acted in accordance with the *rules of the hospital*, but you *do* not refer in particular to one fact or circumstance laid before you by that lady upon which you have been induced to alter your opinion. I cannot help feeling that it is only necessary for me to point out the *unfairness and inadequacy of the comment in order to get it amplified* by further publication, setting out in full the statements made to you by Miss du Cane, as you had previously set out in full the statements made by me to you bearing upon the same matter. I ask for such a publication and I would also ask you to be good enough to publish this letter in order that your readers may know that I desire to adhere fully to the facts which I laid before you.

I do not feel that it would be right to say more at present than that the article in your issue o[illegible] March 7th last met with approval from many persons intimately connected with the hospital and with the facts of the case, and that it was considered a concise and accurate *statement of the true facts* and I think that many persons will be interested to know the facts and circumstances by which Miss du Cane has succeeded in justifying her action to you.

I am, Sirs, yours faithfully,

Oxford, May 30th, 1903. CHARLES E. GAITSKELL.

*** Mr. Gaitskell will see that we expressed ourselves as satisfied that the lady superintendent acted in accordance with the rules of the hospital *in certain circumstances. We do not consider ourselves* satisfied with the rules of the hospital. No answer has been made in detail to our article.—ED. L.

A DISCLAIMER.

To the Editors of THE LANCET.

SIRS,—A letter headed the Cancer and Skin Hospital appeared in the *Liverpool Daily Post of June 9th and I desire to say that it* was inserted without my knowledge or consent. Hoping that you will insert this disclaimer. I am, Sirs, yours faithfully,

ALEX. PAUL SWANSON, L.R.C.S. Irel., &c.,
Honorary Surgeon, Liverpool Cancer and Skin Disease Hospital.

Liverpool, June 11th, 1903.

SOME SOUTH AFRICAN ANIMAL DISEASES.

IN a paper which he has read before the Scottish Microscopical Society, Dr. G. Carrington Purvis of the Bacteriological Institute, Grahamstown, Cape Colony, said that there was probably no country in which domestic animals were liable to a greater variety of diseases than in South Africa. Some of these diseases which are peculiar, or almost peculiar, to South Africa are as follows:—Fly disease, horse sickness, heart water, red-water or Texas fever (found also in Australia and America), panting sickness ("Jag Ziekte") of the sheep, malignant malaria of the dog, catarrhal malarial fever of the sheep, and malignant jaundice of the horse. None of these diseases could be said to be infectious or contagious in any sense of the word, except perhaps the one known as "Jag Ziekte." Horse sickness occurs annually in Natal, the Transvaal, Rhodesia, and the northern parts of Cape [illegible] characterised [illegible] of the head and neck; [illegible] virulent blood [illegible] characterised by exudations into the pleura, lungs, and pericardium. When a horse has been inoculated with virulent blood there is practically nothing to note until on about the eighth day the temperature begins to rise and by the twelfth day it may be as high as 107° F. About the twelfth day the animal is distressed in its breathing, falls down, froths from its mouth and nostrils, and almost invariably dies. Dr. Purvis believes that the disease is due to a malarial parasite, which may be either extra-corpuscular or intra-corpuscular; of these forms the first is usually more or less ovoid and the second is a minute coccus. Dr. Alexander Edington of the Bacteriological Institute at Grahamstown believes, however, that the organism of the disease is a fungus. Rinderpest has been very destructive to cattle in South Africa, as in many other parts of the world; its pathogenesis is not yet definitely ascertained, but Dr. Purvis considers it to be due to a small bacterium or coccus which he has discovered. He has also devised both a curative and a prophylactic method of treating sheep for "heart-water." The former of these is, he says, similar to the one which he advocated in THE LANCET of Dec. 20th, 1890, p. 1354, for scarlet fever in the human subject.

AN EARLY OBSERVATION ON THE USE OF THE MOSQUITO NET.

A CORRESPONDENT sends us the following quotation from the *Edinburgh Review* of August, 1822, pp. 546, 547:—

> "It was lately observed casually that some persons who slept in one of these pestilential spots in Italy under a canopeum or mosquito net *escaped* the effects of the miasm, whilst those *unprovided* with this expedient took the disease" (i.e., Roman Ague or Malaria). Dr. G. Brocchi, "Dello Stato Fisico del Suolo di Roma."

Our correspondent adds that the reviewer designates it, "if true, as one of the most valuable discoveries in modern times in prophylaxis," but that the explanation "that the air breathed and expired by the sleeper acts as an antiseptic, being kept enclosed under the canopeum," is, of course, fanciful and absurd.

MEMORIAL TABLETS.

A MEMORIAL tablet, as follows, has been affixed to a new house situated in Orford-place, Norwich, now occupied by a firm of solicitors. Orford-place, it may be stated, has been rebuilt owing to the widening of the road for the electric tramway.

> "This house is the site of the residence of Sir Thomas Browne, M.D., author of Religio Medici, Vulgar Errors, and many other learned works. He lived here for about 46 years and died in 1682."

Such memorial tablets are always very interesting and we should be glad to see more of them put up by people who own or dwell in historical buildings or places.

THE UNCOVERED DUSTBIN.

THOSE who may have occasion to pass along the main streets of the City or West-end of London before nine in the morning may observe rows of uncovered dustbins standing on the curbstones like sentinels awaiting a procession. When there is a high wind not a small portion of their contents is whirled down the streets and eddies caressingly *round the garments and features of the long-suffering* pedestrian, while on warmer mornings distasteful effluvia are wafted to the nostrils of the hurrying business man who is trying to procure a few breaths of life-supporting oxygen. Those who are not obliged to reach their office, shop, or warehouse until a later hour perhaps hardly realise what advantages they have over their less fortunate brethren. We do not know why these dustbins *do not* have *covers* unless *it is that the covers* would require to be chained and padlocked to the receptacle because some people may have a fondness for annexing such trifles or else, perhaps, because the dustmen who collect the contents of the bins find it too much trouble to remove and to replace a cover. The City corporation has recently prosecuted some dustbin grubbers and proved that the City dustbins and their contents are the *property of the corporation* and that *anyone grubbing* in its dustbins is not only offending against the canons of sanitary science but is also guilty of theft from the corporation. It is hardly out of place to mention that those members of the public who have a fancy for writing to irresponsible and seductive strangers detailing their complaints should be careful of what they are doing, as we recently observed untorn letters which had blown out of an uncovered dustbin lying on the pavement outside the office of a not unknown quack.

PALMAR ECZEMA AND DYSIDROSIS.

IN the June number of the *Polyclinic* among the "Notes of Cases Demonstrated" there are some remarks on plantar and palmar eczema as compared with dysidrosis. With regard to palmar eczema it is pointed out that the diagnosis does not as a rule present any serious difficulty, since in the majority of cases chronic itching eruptions limited to this region are eczematous. It is important to reduce the thickened epidermis by the use of such means as salicylic acid or pyrogallic acid. The case of dysidrosis which was the subject of demonstration occurred in a girl, aged about 13 years, but was not typical. When she was first seen at the Victoria Hospital for Children the sides of the hands were covered with vesicles and small bullæ; these had coalesced in the palms and the greater portion of the epidermis of the palms was macerated. Under treatment with boric lotion and weak boric ointment almost constantly applied the condition had greatly improved the inflammation had subsided considerably.

◆

F.R.C.S. Eng.—Beard and Rockwell, Electro-Therapeutics, being volume of von Ziemssen's Cyclopædia; Lewis Jones, Medical tricity; Dawson Turner, Manual of Medical Electricity; Williams, High Frequency Currents in the Treatment of Diseases. Beard and Rockwell's book, though full so far as it in the light of the rapid advance made in the knowledge of and kindred forms of energy, not quite up to date.

S4 X.—We think that the insurance company ought to pay the fee in view of the statement on the forms to which our refers we are doubtful whether he can legally claim the amount. enforcement of the claim would have to be in the it is impossible to say what view the judge might take of

COMMUNICATIONS not noticed in our present issue will in our next.

Medical Diary for the ensuing W

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.) Samaritan (Gynæcological, by Physicians, 2 P.M.), (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.) Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.) London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.) Throat Golden-square (9.30 A.M.), Soho-square (2 P.M.).

WEDNESDAY (24th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.) National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.) Metropolitan (2.30 P.M.) London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M).

THURSDAY (25th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.) Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (27th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.) Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.) Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily

SOCIETIES.

MONDAY (22nd).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (Hanover-square, W.).—7 P.M. Council. 8 P.M. Annual General Meeting. Election of Officers and Council for the ensuing Session. Casual Communications:—Mr. Charters-White. Photo micrographs of a much-vaunted Dentifrice.—Mr. J. H. Badcock: (1) Fracture of the Mandible during attempted Extraction of a Lower Wisdom Tooth; (2) A Case of Malocclusion due to Tongue-sucking. President: Valedictory Address.

TUESDAY (23rd).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Paper:—Dr. G. The Treatment of Aneurysm by Subcutaneous Injection

Gelatin.—Mr. D'Arcy Power and Mr. G. H. Colt: A Case of Aneurysm of the Abdominal Aorta treated by the Introduction of Silver Wire, with a Description of Instruments Invented and Constructed *by Mr. G. H. Colt to Facilitate the Introduction of Wire* into Aneurysms (with demonstration by means of the epidiascope).

DNESDAY (24th).—DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover square, W.)—5 P.M. Annual Oration:—Dr. Galloway: The Relations of Different Forms of Erythema, *especially to Lupus Erythematosus.*

DAY (26th).—WEST LONDON MEDICO-CHIRURGICAL SOCIETY (Society's Rooms, West London Hospital).—8.30 P.M. Prof. T. C. Allbutt: Disease of the Ascending Aorta. (Cavendish Lecture.)

ECTURES, ADDRESSES, DEMONSTRATIONS, &c.

SDAY (22nd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Dr. A. Whitfield: Clinique. (Skin.) 5.15 P.M. Mr. J. Hutchinson, jun.: Diseases of the Tongue.

ST GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Dunn: Glaucoma.

SDAY (23rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Dr. G. Rankin: Clinique. (Medical.) 5 15 P.M. Mr. F. C. Wallis: Preparation, Methods, and After-treatment in Operations.

ST GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Paget: Appendicitis.

TIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. Ferrier: Cases in the Wards.

DNESDAY (24th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Mr. J. Clarke: Clinique. (Surgical.) 5 15 P.M. Dr. W. Carr: Meningitis in Childhood.

ST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. R. H. Cole: Medico-Legal Relations of Insanity.

SPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. B. Shaw: Some Unusual Auscultatory Phenomena met with in the Examination of the Lungs.

RSDAY (25th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.) 5.15 P.M. Mr. J. Hutchinson, jun.: Diseases of the Tongue.

ST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Edwards: Renal Surgery.

OUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (7, Fitzroy-square, W.).—4 P.M. Dr. T. N. Kelynack: The Hygienic Treatment of Pulmonary Tuberculosis. (Post-Graduate Course.)

[illegible] AL.—4 P.M. Mr. Gibbs: Surgical Cases.

[illegible]

[illegible] CHILDREN (Gt. Ormond street, W.C.).—4 P.M. Mr. H. S. Collier: Demonstration of Selected Cases.

Y'S HOSPITAL MEDICAL SCHOOL—UNIVERSITY OF LONDON (Physiological Theatre).—4 P.M. Dr. E. W. Ainley Walker: Recent Work upon the Nature of Immunity. (Gordon Lecture.)

DAY (26th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. N. MacLehose: Clinique (Eye.) 5 15 P.M. Dr. T. N. Kelynack: Intra thoracic Tumours.

ST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. C. Williams: Electric Light Treatment.

DON HOSPITAL MEDICAL COLLEGE (University of London) (New Clinical Theatre).—4 P.M. Mr. J. Hutchinson: Diseases in India—Cancer and Tumours in India.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 18th, 1903.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Rain-fall.	Solar Radia in Vacuo	Maximum Temp. Shade.	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 a.m.
June 12	30 02	N.E.	0·23	87	55	47	47	52	Cloudy
" 13	29 97	S.	...	97	60	48	50	54	Cloudy
" 14	29 80	N	1·50	59	63	48	50	50	Raining
" 15	29 64	S.W.	1·03	67	54	50	60	50	Raining
" 16	29 59	S.E.	1·65	105	68	47	50	54	Cloudy
" 17	29 71	N.W.	0·07	111	57	49	51	54	Cloudy
" 18	29 63	N.E.	0·25	97	59	47	48	53	Cloudy

During the week marked copies of the following newspapers have been received: *Ardrossan and Saltcoats Herald, Folkestone Express, Irish Times, Shields News, Yorkshire Observer, Whitehaven Advertiser, Edinburgh Evening News, Glasgow Herald, Darlington Star, Cardiff Mail, Cardiff News, Sheffield Independent, North-Eastern Daily Gazette, Hull Daily News, Birmingham Daily Mail, Belfast News, [illegible] Chronicle, Dublin Independent, [illegible] Telegraph, Pall Mall Gazette, Cork Constitution, [illegible], Bedford Times, Cork Herald, Bristol Mercury, Westminster Gazette, Hereford Times, Sanitary Record, Army and Navy Gazette, Surrey Comet, &c.*

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X.—84 X.

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Delivered before the Royal College of Physicians of London

BY CHARLES E. BEEVOR, M.D., F.R.C.P. LOND.,
PHYSICIAN TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC AND THE GREAT NORTHERN HOSPITAL.

LECTURE III.[1]

Delivered on June 16th.

MR. PRESIDENT AND GENTLEMEN,—I have not much to add about the muscles which are usually given as flexors and extensors, adductors, and rotators of the head, except with regard to the sterno-mastoids which are the chief flexors of the head and they can be seen strongly acting when a person is told to raise his head from the pillow when lying on his back, and when this is done powerfully the recti abdominis also contract to fix the sternum, as was pointed out by Winslow.[2] These two sets of muscles are associated together in certain rhythmical spasmodic contractions, as in a case which was under my care lately where a man had clonic spasm of both recti abdominis and also in both sterno-mastoids. In addition to the sterno-mastoids, the platysma myoides, the omohyoids, and the other depressors of the hyoid bone act. (I might add in passing that the depressors of the hyoid bone and the muscles between the hyoid bone and the lower jaw are well brought out when the lower jaw is opened against resistance.) With reference to extension of the head the only muscles which can be felt to contract are the clavicular part of the trapezii, the complexi splenii capitis, and probably the trachelo-mastoids.

The sterno-mastoids have been described as extensors of the head when the head is in the extreme position of extension and it is still taught in the most recent books on anatomy. Duchenne[3] also stated as the result of electrical stimulation that the sterno-mastoids "produce, on the contrary, extension of the head when it happens to be in a certain degree of reversal backwards." With this opinion I find that I cannot agree. Some time ago I made some observations on this point and I failed to find that the sterno-mastoids acted in any position as extensors of the head. To test this let the head be placed as far back in extension as it will go and then direct the person to press the head back- [illegible] tendons of the sterno-mastoids [illegible] ut if, on the contrary, flexion of [illegible] that position against resistance the tendons immediately become tense. I was therefore glad to find, which I was not aware of at the time, what Winslow[4] had stated: "The insertions of these muscles," he says, "in the posterior part of the mastoid apophyses has made some anatomists believe that they are more proper to bend the head backward than forward, their insertions being behind the condyloid articulation of the os occipitis"; but in opposition to this view he adds that "the moveable point [of the insertions] can only be determined to that part which is nearest the fleshy body and the most anterior, and consequently not situated so far back as is imagined." And on the same subject he remarks "that experiments made on dead bodies have been apt to mislead"—an opinion which I should wish to indorse.

I have no special observation to make on the ordinary muscles, but on the extraordinary muscles of respiration I should say that I have observed several cases of dyspnœa and that among the first muscles to come into action are the sterno-mastoids and as these muscles then take their fixed point from the skull the head has to be fixed by the extensors of the head. Of the other muscles I have never seen any action of the pectoralis major in dyspnœa and I think that the action which is attributed to that muscle is really performed by the pectoralis minor. This muscle could be seen acting as an inspiratory muscle in the cases which I have observed where the pectoralis major was absent. The origin of the pectoralis major from the cartilages of the ribs and the direction of its fibres are also against its having much power as an inspiratory muscle and it does not come into action till the end of a forced inspiration. Of the other extraordinary muscles the latissimus dorsi, the serratus magnus, the scaleni—though the actions of both these muscles were doubted by Winslow—and the claviculo-occipital fibres of the trapezius are the chief ones that can be observed. The serratus magnus I have observed not to be acting in one case of severe dyspnœa.

With reference to the expiratory muscles, and especially those used in such violent efforts as coughing and sneezing, I would refer to one of the muscles which is usually described as a muscle of respiration only—the latissimus dorsi. I observed a few years back that it is a powerful expiratory muscle and this is an action which anyone can prove for himself by putting the hand on the posterior fold of the axilla and on coughing a strong contraction of the latissimus dorsi will be felt. As I have already mentioned, this muscle acts also as an inspiratory muscle, using the fibres which take origin from the lower ribs to elevate them, and, therefore, it is a muscle which acts in both inspiration and expiration, a circumstance which it is rather difficult to explain. In expiration it doubtless acts by compressing the posterior part of the abdomen, in which action it is joined by [illegible] muscle which contracts in expiratory cough is the lower part of the trapezius, but whether its action is for the purpose of fixing the scapula it is difficult to say. The action of all the respiratory muscles is bilateral and their relation between the bilateral and the unilateral actions of the latissimus dorsi will be referred to later.

The time at my disposal will not permit me to say anything about the movements of the lower limb or of the ocular or facial movements. I propose therefore to leave the question of the muscles observed to take part in these different movements.

In describing the muscles which take part in any movement I have not made any mention of the action of the antagonists, and as they are considered by some authors to take a very important part in every movement it is necessary in any account of the action of muscles to consider the various views which have been held on the subject. Before considering these views, however, we must first define what [illegible] antagonists of a movement. The antagonists [illegible] move the joint in a [illegible] to this movement. This definition, or one similar to it, is so obvious that it seems hardly necessary, but in the action of closing the fingers and thumb, which, as we have already seen, is produced by the flexors of the fingers and thumb acting with the extensors of the wrist, the latter have been described as the antagonists [illegible] of the fingers and thumb. Now the movement [illegible] and thumb and the [illegible] to this is extension of the fingers and thumb, and this movement cannot be performed by the extensors of the carpus, but by the extensors of the fingers and thumb which are the true antagonists. The extensors of the carpus are synergial muscles in this movement.

The question of the part played by the antagonists in a movement has exercised men's minds from the time of Galen to the present day, and it is still a matter of controversy. According to Galen,[5] "each muscle has only a single movement which is active, it does not possess the opposite movement except accidentally. On the other hand, a muscle acts when it draws towards itself the part which is in movement, but it does not act when it is drawn to the opposite side by another muscle. ...... For each part, put into movement by the muscles as by reins, being obliged to take part in the activity of the two sides, presents in turn one of the two muscles tense and the other relaxed." It is evident from the above quotation that Galen considered that the antagonists to a movement do not contract when that particular movement is being executed. I am unable to find any other reference to the question of the antagonist till Winslow's work. Winslow[6] defined the antagonists in the following terms: "*To move any part or to keep it in a determinate position all the muscles belonging to it must coöperate*"—the italics are mine—"some of them drawing the part directly to the situation or attitude designed, some moderating this first motion by acting in a contrary direction, and others directing it laterally. The first kind of these muscles I call principal movers, the second moderators, and the third directors. The moderators in general are the same with those termed antagonists and the want of their action is in many cases supplied by the weight of the part to which they are fixed or by the additional weight or resistance of some other body." From this extract it is evident that Winslow considered that to move a part all its muscles, including the antagonists, coöperate, but he makes the important proviso that the want of their action is supplied by the weight of the part or by external resistance. This proviso limits very considerably the occasions when, according to Winslow, the antagonists act, for if they do not act when a movement is being performed against gravity or when any resistance has to be overcome the occasions are narrowed down to unopposed movements taking place in the horizontal plane where gravity cannot act. Such a movement would be that of flexion or extension of the terminal phalanges of the fingers in the horizontal direction, or of the elbow in the same plane, or of rotation of the head to the right or to the left.

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[1] Lectures I. and II. were published in THE LANCET of June 20th, [illegible] by [illegible] by [illegible] II., pp. 320, 372.

[3] Physiologie des Mouvements, 1867, p. 715.

[4] Loc. cit., section iii., p. 1075.

[5] Galen's works, De Usu Partium, part vii., book I, chapter iv., p. 331; translated by Dr Daremberg, Paris, 18[illegible]

In his Croonian lecture before the Royal Society John Hunter[7] describes the actions of muscles as immediate and secondary; the first produces immediate action of the part, the second produces the assistant, supporting and regulating actions, as in walking when the right leg moves, the muscles of the left side of the trunk act to support the whole of the left leg. On p. 262 he states that "the relaxers which become the sustainers of the muscles in action never allow themselves to relax to their full extent while the contractors are carrying on the motion of a part as it would produce weakness." The contractors, I conclude, correspond to Winslow's principal movers and the relaxers to his moderators or antagonists. If this be so Hunter evidently considered that the antagonists are never fully relaxed, but I am unable to find any expression of opinion as to whether this is modified when the movement is resisted.

Duchenne[8] is very explicit in his opinion about the action of the antagonist and he says: "In the main all voluntary movement to be executed with precision ought to be moderated by its antagonist muscles." He goes on to state that this opinion is contrary to the theory of Galen, which I have already mentioned, "and has been propagated to the present time in spite of a kind of resistance made against it by the illustrious Winslow." Duchenne quotes Winslow, but he omits the proviso of Winslow that the antagonists are excepted when any weight or assistance supplies their action. Further on in the same chapter[9] Duchenne states that he has "demonstrated experimentally that all the movements of the limbs and trunk result from a double nervous excitation by virtue of which the two orders of muscles ...... the impelling and the moderating associations are put simultaneously into action—one to produce the movements, the others to moderate them. Without ...... this entente of the antagonists the movements lose inevitably their precision and certainty." I gather from this that Duchenne's opinion is more comprehensive than Winslow's and that he considers that in all voluntary movements the antagonists take part.

On this subject of the antagonists interesting papers have been published by Beaums[10] and by Demeny.[11] The latter has made some most important observations by means of two Marey's myographs fixed on to the biceps and triceps by which tracings of these muscles under varying conditions were obtained. The conclusions which he arrived at were as follows. If static resistance is made against an effort tending to produce flexion or extension the antagonists of this movement relax. The antagonists are relaxed also during the movement every time that an external resistance acts in the way of their action whether this resistance be overcome or not by the muscles contending against it and whether these muscles shorten or elongate. In natural movements (where there is no resistance) where they are of a slow and uniform rate there is a simultaneous action of the antagonists; where the rate is variable the antagonists act as moderators of the rate and come into play a little before the movement has ceased or changed its character. Demeny's observations are therefore in confirmation of Winslow's rather than those of Duchenne. On the other hand, experiments have been made by Sherrington[11] on the action of the antagonists by electrical stimulation of the excitable cortex and he has found that in addition to contraction of the principal muscles taking part in a movement there is not only relaxation but inhibition of the tone of the antagonists of this movement. Sherrington and Hering[13] have also shown more recently the same thing by electrical stimulation of the part of the cortex where movements of flexion of the elbow were represented. They found that when the biceps contracted there was relaxation of the triceps. It therefore seems probable that the inhibitory action of the antagonists starts in the same part of the cortex and takes the same course in the pyramidal tract as the excitatory action of the principal movers. Sherrington's observations therefore agree with those of Demeny, so far as strong opposed movements are concerned. With regard to weak movements, Sherrington has informed me that even with minimal stimulation he still obtains relaxation of the antagonists; there is, therefore, apparently, a difference between the results produced by stimulating the excitable cortex in the monkey and those of making a person perform a slow unopposed movement, as the antagonists were found to be relaxed on stimulation according to Sherrington and to contract in the case of slow voluntary movement according to Demeny. From my own observations I have held that in strong movements against resistance the antagonists are always relaxed and I expressed that opinion in a paper which I wrote in 1891.[14]

This power of relaxing a group of muscles by getting the patient powerfully to contract the antagonists against resistance, I have for some time employed for clinical examination and the cases in which it is most useful are in affections about the shoulder-joint where a patient is unable to abduct the arm without the inferior angle of the scapula moving outwards at once, a sign that either the deltoid is paralysed or that it is not acting owing to painful rheumatic changes in the joint or that the joint is ankylosed. If the deltoid be contracted it can be relaxed by first passively abducting the humerus as near the horizontal line as possible and then directing the patient actively to adduct the humerus against resistance when the deltoid will be relaxed. On then again directing the patient to try to keep the arm abducted the deltoid will be felt to contract if it is not paralysed.

With regard to the question as to whether the antagonists act in all unopposed movements, as the experiments of Demeny would seem to show, I should like to point out that in the movement of rotation of the head we have an exceptional opportunity of examining the sterno-mastoid muscles, and in addition the movement of the head being in the horizontal plane there is no chance of any error from the action of gravity. Here one of the muscles is a principal mover while its fellow of the opposite side is its antagonist, so that in rotating the head with the face turned to the patient's right the left sterno-mastoid is a principal mover and the right sterno-mastoid is its antagonist. On rotating the head slowly or quickly I am unable to find either on inspection or on palpation that there is any contraction of the right sterno-mastoid; and, further, if the head be turned very quickly and be suddenly checked there is still no contraction of the right sterno-mastoid. It is quite possible that some of the other rotator muscles must act as a check to the movement, but I should say that the right sterno-mastoid certainly does not—and the muscle is so superficially situated that it would hardly be possible to escape observation. To sum up, I should myself agree with Winslow that in all movements where there is extreme resistance or where the weight of the limb has to be moved against gravity the antagonists do not act On the other hand, in the unopposed movements of rotating the head to the right, where gravity does not act, I cannot find that there is an action of the right sterno-mastoid, the antagonist to this movement; also Sherrington found by cortical stimulation that the antagonists to the resisting movement were relaxed.

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[6] Loc. cit., vol. i., section iii., p. 159, No. 41.

[7] The Works of John Hunter, F.R.S., 1837, p. 249.

[8] Loc. cit., p. 759.

[9] Loc. cit., p. 766.

[10] Archives de Physiologie, fifth series, tome 1, 1889.

[11] Ibid., tome 2, 1890.

[12] Proceedings of the Royal Society, 1893, vol. liii., p. 407.

[13] Ibid., 1897, vol. lxii.

[14] On Some Points in the Action of Muscles, Brain, vol. xiv., 1891.

Before leaving the question of the antagonists I should like to mention a clinical case where these muscles acted in a way which I have not seen before. It was the case of a girl, aged 18 years, who had incomplete right hemiplegia and hemianæsthesia. She had, however, no signs of organic disease and the case was considered to be one of functional or hysterical paralysis. The great point of interest about the case was that whenever she was asked to perform a certain movement the first action observed was that of the antagonist muscles. For instance, on being told to extend the elbow the first muscle observed to contract was the supinator longus, one of the antagonists to the movement of extension. This contraction of the supinator longus was followed immediately by that of the triceps and there was then a confusion with to-and-fro movements due to the alternate contraction of the extensors and flexors of the elbow. A similar thing occurred when she was told to flex the elbow; then the triceps was felt to contract first and was followed by a movement of the flexors of the elbow, and then the joint moved to and fro with much confusion. I have observed a similar condition to occur in dorso-flexing the ankle, a joint in which the typical to-and-fro hesitating confused movement is so often seen in these cases of hysterical paralysis. In another case on asking the patient to extend the knee the first contraction was felt in the flexors of the knee. In all these cases as the patient improves this symptom passes off and the joint is then moved in the normal way. This condition of the antagonists acting before the principal movers begin I have never seen in any other conditions besides those of so-called hysterical or functional paralysis. I therefore venture to think that it is a diagnostic symptom of this condition.

A muscle may take part in two different movements, as, for instance, the biceps brachii takes part with the supinator brevis in the group of muscles set apart for the movement of supination and also takes part with the brachialis anticus, supinator longus, and pronator teres in that for the performance of the movement of flexion of the forearm. It is therefore possible that if one of these movements is lost by an organic lesion of the central nervous system and not the other, the biceps which take part in both movements may be paralysed for the one movement and not for the other. I have seen cases of hemiplegia where the movement of supination was lost but not that of flexion of the elbow. Another movement which is often lost in hemiplegia when the arm is paralysed is that of elevation of the shoulder. Now the muscles which take part in the elevation of the shoulder can also, taking their fixed point from the shoulder, draw down the head and neck to that side; such muscles are the trapezius (clavicular fibres) and the levator anguli scapulæ. I have observed cases of hemiplegia where these muscles were paralysed when they acted as elevators of the shoulder but not when they acted as lateral flexors of the neck—a condition which would probably signify that the movement of elevating the shoulder was represented in a different part of the excitable cortex from that of adducting the head to that shoulder. The same thing occurs with the ocular muscles where each internal rectus can act when it takes part in conjugate movements with the external rectus of the opposite eye, but when the two internal recti act together in converging the eyes they are paralysed. Some of the above cases are instances of paralysis of a muscle for one form of unilateral action and not for another, but there is another class where a muscle may be paralysed for a unilateral movement of the arm but not when it takes part in the bilateral action of respiration.

Dr. J. Hughlings Jackson was the first to call attention to the paralysis of the clavicular fibres of the trapezius in elevating the shoulder in hemiplegia while it was still able to act as a bilateral muscle in deep inspiration. I have already described how the latissimus dorsi takes part in inspiration and expiration and that it can readily be felt to contract on coughing. The muscles of both sides here act together and, as far as I know, it is not possible for a person voluntarily to inspire or to expire as in coughing, using only the muscles of one side of the chest. Besides this bilateral movement there is the unilateral action of the muscle as an arm muscle, where it takes part in the [illegible] expiratory movement in the production of a cough or a sneeze. A cough can be produced reflexly or voluntarily, but a sneeze only reflexly, and we have therefore three conditions under which the latissimus dorsi may act, viz.:—(1) acting with the muscle of the opposite side as an expiratory muscle: (*a*) reflex coughing or sneezing, and (*b*) voluntary coughing; and (2) acting independently of the other side as an arm muscle. The next question is what will be the action of this muscle in cases of hemiplegia. I have now examined a great many cases of hemiplegia in which the arm was paralysed and in which there was complete loss of the movement of adducting the humerus to the chest wall and where consequently the action of the latissimus dorsi as an adductor was absent. Of the 12 cases which I described in my original paper in ten the lesion was presumably cerebral and probably in the internal capsule, while in two of the cases the lesion was ascertained and was in one case a tumour of the ascending frontal convolution and in the other a tumour of the centrum ovale. In all of these cases, with the exception of two, the following conditions were found. 1. In reflex coughing or sneezing the respiratory action of the latissimus dorsi was about equal on the two sides. 2. In voluntary coughing the action of the latissimus dorsi was obtained on both sides but it was frequently diminished in action or occurred later on the paralysed than on the normal side. 3. On attempted voluntary adduction of the humerus there was no action of the latissimus on the paralysed side. In two of the cases of hemiplegia where there was an exception to the general rule given above it was found that no movement was obtained on the paralysed side in voluntary coughing, but in reflex coughing or sneezing the latissimus dorsi on the paralysed side was seen to contract. A lesion, therefore, of the—let us say left—motor cortex of the internal capsule will paralyse the right latissimus dorsi as a unilateral arm muscle but will not paralyse it when it acts as a bilateral muscle of respiration reflexly and in most cases when it so acts voluntarily.

Before leaving this subject I should like to mention that this bilateral action of the latissimus is of value in diagnosing cerebral lesions from those of the spinal cord and peripheral nerves in those cases where the arm and leg of one side are involved without the face. In the case of a lesion, such as a tumour, pressing on one side of the spinal cord between the respiratory centre and the brachial enlargement, all the movements of the latissimus dorsi, including unilateral arm movement, bilateral voluntary coughing, and reflex coughing, would be lost, while in lesions above the level of the respiratory centre the reflex bilateral movement of coughing would be preserved.

Another example, but of a different kind, of paralysis of a muscle for one movement and not for another I have observed in the case of the upper or clavicular fibres of the pectoralis major. This muscle I have already referred to as one which has two actions: it acts with its lower or sternal fibres in adducting the humerus to the middle line and it also acts with the deltoid in advancing the humerus. In certain cases where the deltoid is paralysed, although the clavicular fibres of the pectoralis major can be felt to act well in conjunction with its sternal fibres in adducting the humerus, they make no attempt to advance the humerus, or when it is passively advanced to contract and to keep it in that position. The first case which I published[14] was one of paralysis after an accident and was due to lesion of the brachial plexus or of the cells of the anterior horns of the spinal cord. I have seen several other cases occurring in lesions of the cord or brachial plexus. This class of case differs from the preceding one in that we have here paralysis of a muscle for one movement and not for another, arising not from a cerebral lesion but from a lesion of the cord or the brachial plexus. This selective paralysis from a lesion of the cells of the anterior horns is in favour of the theory that these cells are arranged in a physiological rather than an anatomical manner, but as there are other reasons against this theory is it possible that there is any other explanation?

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[13] On the Bilateral Action of the Latissimus Dorsi in Hemiplegia. Brit. Med Jour., Oct. 1st, 1893.

[14] Brain, vol. xiv., 1891.

Is it possible that the upper fibres of the pectoralis major which act with its lower half are not the same as those which failed to act with the paralysed deltoid? I do not think so, because there were no signs of degeneration to electrical testing in the pectoralis major and it is not probable that the same fibre should have a double nerve-supply from different parts of the brachial enlargement. Another explanation might be that when the upper fibres of the pectoralis major act with the deltoid in advancing the arm they can only do so after the deltoid has acted first and that as the deltoid does not act at all the pectoral will not start the action, but against this explanation is the observation that the weight of the arm is sufficient to bring out the action of the upper fibres of the pectoralis major and that strong resistance is not required, as in the case of the relation of the extensors of the wrist to that of the extensors of the fingers in the movement of extending the wrist described in a previous lecture. At the present time I am not able to give a definite explanation of this selective paralysis of the upper fibres of the pectoralis major.

Another question which has arisen in the examination of the actions of muscles is whether a muscle ever takes a principal or direct action in a movement which is diametrically opposed to its usual action. In considering this point it is obvious that the query could not be made in the case of a hinge joint (ginglymus) such as the elbow, as the triceps could not possibly take a direct part in the action of flexion of the elbow. It is, however, in joints like the radio-ulnar (rotatory) articulations or in ball and socket (enarthrodial) joints that it would be possible for a muscle to take part in two opposite movements. If a list is made of the muscles which are considered by anatomists to have this double action it will be found to contain the following muscles: the supinator longus, the pectoralis major clavicular fibres, the deltoid posterior fibres, and both sterno-mastoids acting together.

As I have pointed out in a previous lecture the supinator longus has been considered by many anatomists to be both a pronator and a supinator and in one of the most recent works on anatomy[17] it is stated that "the brachio-radialis (or supinator longus) assists in flexion and pronation on the one hand and in extension and supination on the other hand." This, therefore, expresses the opinion that the same muscle does take part (as a principal mover, I conclude) in two movements which are diametrically opposed to each other. With this opinion I find that I cannot agree, as from the examination of the muscle on the living subject I consider that it certainly did not take part in extension and I cannot find that it contracts in supination, its action besides flexion of the elbow-joint being perhaps very slight pronation at the end of a strong movement.

The clavicular fibres of the pectoralis major were considered by Duchenne to be both elevators and depressors of the humerus when the arm was above the horizontal line. From my observations these fibres never act in depressing the humerus, a movement which is performed by the inferior or sternal fibres of the pectoralis major.

The posterior fibres of the deltoid were considered by Duchenne to be elevators of the hanging humerus as far as an angle of 45° to the vertical, beyond which they became depressors and antagonists to the rest of the deltoid; in other words, that after an angle of 45° the posterior one-third of the deltoid suddenly changes its mind, so to say, and takes part in a movement which is diametrically opposed to the action of its previous movement. From my observations I consider that the posterior one-third of the deltoid only takes part in adduction, an opinion which I was glad to find was expressed by Richer.[18]

The last movement which I have cited is that of the two sterno-mastoids acting together. Their ordinary action is to flex the head forwards as in lifting the head from a pillow, but most anatomists describe that when the head is put back far enough these muscles act as extensors of the head. I have already expressed the opinion that I do not think that this action occurs. In cases of progressive muscular atrophy affecting the extensor muscles of the head at the back of the neck, but not the sterno-mastoids, the head falls forwards till the chin rests on the chest, due to the inability of the extensors to hold up the head against gravity, but if the patient leans far back in a chair so that the head can be allowed to extend backwards as far as it will go there will still be a slight contraction of the flexors—viz., the sterno-mastoids—to counteract gravity. Now if while in that position the patient be told to extend the head further against resistance he cannot do so owing to the paralysis of the extensors at the back of the neck, but the sterno-mastoids, so far from contracting, actually relax. There may be other muscles which may act in two opposite ways, but of those which I have cited I cannot find that any one of them takes a principal part in a movement which is diametrically opposite to its usual action.

There is, however, one muscle which certainly takes part in two opposite movements—viz., the latissimus dorsi, which contracts in both inspiration and expiration, though the action is stronger in expiration than in inspiration. I have already referred to this point and I would only say now that I think the part of the muscle arising from the three lower ribs must have a different action to the main part arising from the spine and the iliac crest. In inspiration this costal origin acts by elevating the ribs; on the other hand, in expiration these costal fibres fix the ribs and enable the external oblique muscles, whose origin interdigitates with that of the latissimus dorsi, to contract vigorously while the main part of the latissimus acts with the external oblique as a principal mover in compressing the abdominal cavity. I should, therefore, look upon the costal fibres as prime movers in inspiration and as synergic muscles in expiration. I think, therefore, that one is justified in making the statement that a muscle does not take a principal part in a movement which is diametrically opposed to its usual action, or, in other words, in two movements which are opposite in direction. I make this qualification with regard to muscles taking a principal part in a movement, as in my paper in *Brain*[19] I did not make this qualification, but I had not then noted the various muscles which act as synergic muscles in a movement. For instance, in both supination and pronation of the forearm the triceps acts to counteract the flexor action of the biceps and of the pronator terés, but as the triceps is not a principal mover in either of these movements its action would not be against the statement I have made.

Having now described the muscles which enter into and produce the movements of the different joints I propose now to say a few words about the manner in which the muscles which take part in producing any movement are associated together. In the first place do all the muscles which can take part in a movement always act whether the movement is a weak one or a strong one? I believe that in the case of a single muscle which is stimulated through its nerve physiologists hold that all the fibres of the muscle contract and that the minimum amount of work is produced not by using only some of the muscle fibres, but by using all the fibres to a slight degree of contraction, while when the maximum work is required the same fibres contract strongly.[20] The question arises whether the same principle can be applied to groups of muscles and we have to determine in producing the minimal force whether all the muscles taking part in the movement contract or only certain muscles in the group. Or, to take a simile from marine engineering, whether when a ship is travelling at half-speed all the boilers are working at half their full pressure or only half the boilers are working at full pressure.

It is not very easy to find a group of muscles the individual members of which can be examined and the order in which they take part in a movement noted. I think that the movement of supination which is effected by the supinator brevis and the biceps is one in which it is possible to ascertain how soon the biceps takes part in the movement. For this purpose, if the elbow be rested on a table and the forearm be kept in a vertical position midway between flexion and extension and at right angles to the upper arm, it will be found that the forearm can be supinated if there be no resistance without any contraction of the biceps—a point which can be ascertained by hooking the forefinger round the tendon of the biceps at the elbow. If now resistance be made to the supinating forearm the biceps will be felt to contract after the resistance has reached a certain amount. I have measured this amount and find that it comes to one pound. It therefore appears that the supinator brevis will do the work of supination when only the inertia of the bones has to be overcome, but as soon as work over one pound is required to be done the biceps is called in to help. The relation of the extensores digitorum to the extensores carpi in extending the wrist is another illustration. These two examples, I think, show that there is a definite order in which the muscles for the performance of a movement come into action.

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[17] Text-book of Anatomy, edited by D. J. Cunningham, F.R.S., p. 335, 1902.

[18] Physiologie Artistique.

[19] Brain, vol. xiv., 1891, p. 57.

[20] Cf. Gotch: Journal of Physiology, Dec. 15th, 1902.

All the muscles which are grouped together for the performance of a movement do not come into action when only slight effects are required, but a certain increase of work has to be encountered before they all act. In connexion with this it is interesting to note that Sherrington[21] has found a similar condition in reflex actions, as on stimulating electrically the posterior root of the fifth cervical nerve with a Kronecke secondary coil at 15, good contraction of the supinator group was obtained in the monkey, but to evoke contemporaneous action of the biceps with the supinator a much stronger current of 90 was required.

Besides the muscles directly concerned with a movement other muscles are put into action as in performing the different movements of flexing the fingers, of flexing the fingers and thumb as in grasping, and of flexing or extending the wrist we put into action only the muscles which are directly concerned with these movements if the force exerted is slight or moderate, but if these movements are performed more powerfully other muscles are seen to join in the movement. These other muscles which are brought into the movement are the flexors and extensors of the elbow. I have therefore made some observations to ascertain which of the movements of the wrist and digits are accompanied by contraction of the flexors of the elbow, which by the extensors of the elbow, and which by both these sets of muscles. I have also measured the amount of force required to be exerted before these muscles acting on the elbow join in the movement and also to test the influence of position I have made the observations when the forearm was in the position of pronation and when in that of supination.

Table showing the Sequence of Movements in the Upper Arm to Movements of the Hand in Positions of Supination and of Pronation.

Movement performed.	Position of the forearm.	Amount of work required to be done before the triceps contracts.	Amount of work required to be done before the biceps contracts.
Fingers flexed	Supinated.	No contraction	18 pounds.
Traction at right angles to the line of the forearm	Pronated.	1½ pounds.	No contraction to 18 pounds
Fingers extended	Supinated.	4 pounds	No contraction
" "	Pronated.	No contraction	" "
Thumb extended	—	" "	—
Thumb and fingers flexed (grasping) ..	Supinated.	22 pounds.	33 pounds
Thumb and fingers flexed (grasping) ..	Pronated.	22 pounds.	40 pounds.
Wrist flexed	Supinated.	No contraction to 32 pounds.	22 pounds
" "	Pronated.	2 pounds.	No contraction.
Wrist extended	Supinated.	4 pounds.	No contraction to 24 pounds.
" "	Pronated.	No contraction	22 pounds.

[illegible] the forearm was laid flat on a table [illegible] upination, the elbow was [illegible], and the amount of work done was either registered by a dynamometer, which was grasped in the hand, or traction was made on the joints under observation by a band passed over the phalanges or the metacarpal bones and connected with a spring balance which registered the amount of work which the movement had to resist before the biceps or triceps contracted. The contraction of the biceps was ascertained by the finger hooked round its tendon near its insertion and the contraction of the triceps was easily felt by the finger and thumb placed on either side of it just above the elbow. It is to be remarked in the accompanying table of sequences that in some cases a very slight amount of resistance was able to bring out the coöperation of the triceps. For instance, in the position of pronation the triceps is called into action when the resistance to the flexion of the fingers or wrist is only from one and a half to two pounds and in the position of supination the triceps contracts when the resistance to the extension of the fingers and wrist is only four pounds. Why in the converse conditions the biceps never comes into the movement till much higher pressures are experienced is a question which further observations will be required to elucidate. First, taking the forearm in the position of supination it will be seen on looking at the table of the sequence of movements, or perhaps I should say the sequence of synergic or fixing muscles, that in flexion of the fingers, whereas the biceps contracts when the resistance to the movement of flexion amounts to about 18 pounds (8 kilogrammes) the triceps does not contract at all. Also in extension of the fingers the triceps contracts when so little resistance as four pounds (one and three-quarter kilogrammes) is experienced and no contraction of the biceps occurs even with a pressure which can overcome the extension of the fingers These observations show that in the supinated position of the forearm flexion of the fingers, when opposed, is followed by contraction of the biceps, and extension of the fingers, when opposed, is accompanied by contraction of the triceps. Secondly, that in grasping with the fingers and thumb, which, as we have seen in a previous lecture, is performed by the flexors of the thumb and fingers and the extensors of the wrist, the contraction of both the biceps and triceps occurs but that of the triceps first. Thirdly, in extension of the thumb only, a movement which would probably not affect the elbow-joint, I could not discover any contraction of the biceps or triceps; in other words, the muscles producing flexion or extension of the elbow are brought into a movement which is in the direction of flexion or extension respectively or to counteract the tendency of the resistance to move the elbow in the opposite direction, but in a movement like grasping, which is not in the direction of flexion or extension, both sets of muscles (triceps and biceps) contract and the elbow is kept fixed. That this sequence is very much due to position is shown by the opposite results which were obtained according as the forearm was pronated or supinated. For instance, in flexion of the fingers or of the wrist in the supinated position the biceps contracted at 18 pounds and 22 pounds respectively but not at all in the pronated position This is probably because when the fingers or wrist is flexed against resistance with the forearm supinated the opposition to movement of flexion of the fingers or wrist is in the direction of extension of the elbow and the biceps contracts so as to prevent the elbow being extended when the pressure on the wrist or finger reaches a certain amount. But when the forearm is in the pronated position the conditions are reversed; the direction of the opposition to the flexion of the wrist is now in the direction of flexion of the elbow and to prevent the elbow being flexed it is now the triceps which contracts and not the biceps.

To elucidate still further the question of position I have made experiments on the movement of grasping with the fingers and thumb: (1) with the forearm resting free on a flat surface and (2) with the forearm fixed immoveably on a flat surface. It will be seen on looking at the table of sequences that in the movement of grasping the contraction of the triceps occurs sooner than that of the biceps. As there was evidently some disturbance of the position of the elbow which necessitated contraction of the triceps before that of the biceps the forearm was fixed to prevent any movement of the elbow. In the position of supination, whereas with the forearm resting freely the triceps contracted when the grasp registered 24 pounds, with the forearm fixed it did not contract till the grasp was almost doubled—i.e., 45 pounds. In the position of pronation with the forearm free the triceps contracted when the grasp was 13 pounds and with the forearm fixed at 29 pounds. The same conditions were obtained when the forearm was in the mid-position between supination and pronation. The contraction of the biceps was not influenced by the position of the forearm being free or fixed. These observations show that the contraction of the triceps [illegible] some action of flexion of the elbow [illegible] asping and on carefully [illegible] when the forearm rested [illegible] of flexion of the elbow was seen. I have measured the force of this flexion of the elbow by a band round the lower end of the forearm, which was attached to a fixed point with a spring balance interposed, and I find that the force exerted by the elbow in grasping amounts to one pound. I have also ascertained that it makes no difference whether the grasp is 29 pounds or the maximum is 54 pounds, as the amount of force produced by this slight flexion of the elbow is in both cases one pound. This would mean that in the supinated position whatever the strength of the grasp the triceps so adapts itself that it will not permit flexion of the elbow of more strength than one pound.

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[21] Transactions of the Philosophical Society, Series B, vol. cxc., 1898, p 154

Another question which arises is, Why in the supinated position does the triceps not coöperate till the grasp has reached 24 pounds, whereas in the pronated position it takes part in the movement when the grasp has reached 13 pounds and in the mid-position at 20 pounds between the two other fingers? It must mean that in the position of pronation the forearm muscles produce flexion of the elbow sooner than in the position of supination and therefore that the triceps must intervene sooner to prevent flexion of the elbow. If this be true it is in harmony with what was stated in a previous lecture that patients who have lost their proper flexion of the elbow manage to flex this joint by first putting the forearm into the position of pronation.

LECTURE IV.

Delivered on June 18th.

MR. PRESIDENT AND GENTLEMEN,—In my last lecture I described that in the movements of the wrist and fingers, when they were performed powerfully, there was contraction of the muscles acting on the elbow-joint either of the biceps or the triceps or of both. And I pointed out that in flexing of the fingers and wrist the biceps contracted and in extending the fingers and wrist the triceps contracted, while in closing the fist the triceps acted first, followed by the biceps. The fixation action of muscles was described by John Hunter in his Croonian Lectures on Muscular Motion delivered before the Royal Society in 1777,[22] where he stated that "there is in every animal, therefore, a fixed point from which the parts of the body take their principal motions. In the human body this fixed point seems to be in the joints of the thigh bones, which point being in the middle of the body must be common to the extremities. ...... Besides this there are many fixed points, so that the body is to be looked upon as a chain of joints whose general centre of motion is in the joints of the thighs." Now this centre of motion corresponds to the point of centre of gravity described by subsequent observers. This position of a fixed point depends on the attitude of the person and the place where his body comes in contact with the ground and where it gets a firm foundation, as, for instance, if a person advances the upper limb when lying on his back on the ground the fixed point will be the cervicodorsal spine; if he perform the same movement sitting on a chair the fixed point will be the pelvis; if, however, the same movement be performed in the erect posture the fixed point will be where the soles of the feet come in contact with the firm ground. We therefore, it seems to me, have to differentiate in any movement between the muscles which take part directly in that movement and the muscles which are used to fix the joints which lie between the joint which is actively engaged and the fixed point or base on which the structure works, and again these fixing muscles have to be separated into those which always take part in the strong movements irrespectively of the posture of the person which we may call *essential* and those which depend on the position of the person and where his fixed point or base is, which we may call *postural.*

As an example of the essential muscles we may take the contraction of the triceps and biceps which accompany the movements of the hand and which I have just described, and as an example of the postural muscles the contraction of the erector spinæ when the upper limb of the opposite side is advanced or abducted and which, as I showed in a former lecture, only contract in certain positions of the spine to prevent the equilibrium being disturbed. I should therefore describe the muscles taking part in any one movement as: (*a*) prime movers; (*b*) synergic muscles; (*c*) fixation muscles: (1) indispensable or essential and (2) postural; and (*d*) antagonist muscles in occasional movements. I take as an example the movement of grasping an object or closing the fist. Here the prime movers are the flexors digitorum and flexor pollicis and small thumb muscles. The synergic muscles are the extensores carpi and the essential fixation muscles are the triceps and biceps. Another example is the movement of advancing the humerus. Here the prime movers are the deltoid anterior fibres, pectoralis major superior fibres, biceps; the synergic muscle triceps (outer and inner heads) which come into play to counteract the flexor action of the biceps; the fixation muscles: (1) essential, trapezius, and (2) postural, erectores spinæ. The principal or prime movers are the muscles which directly produce the action required and are called by some authors the antagonists; the synergics are the muscles which, as I have previously stated, are brought into the combination when a prime mover has, by passing over two or more joints, two or more actions of which only one is required and the synergics are the muscles which neutralise these undesired actions; they are represented in the first example given above by the extensores carpi. The fixation muscles, as I have already described them, are: (1) those which are essential to the movement in all postures and which are not influenced by the position of the person; and (2) those which only act to prevent the equilibrium of the trunk being disturbed by the movement and which I have therefore called postural. The antagonists produce the movement which is diametrically opposed to that of the prime movers. Before proceeding to describe the relation of these different classes of muscles to each other I must refer to the classifications of previous observers.

According to Winslow,[23] the muscles may be divided into: (*a*) principal movers; (*b*) moderators or antagonists; and (*c*) directors or collateral muscles which are wanting in hinge-joints (ginglymus), and as an illustration he cites[24] the muscles employed in standing where the principal movers are the gastrocnemii and soleus; the moderators are the tibialis anticus and peroneus medius and minimus; and the directors are the tibialis posticus and peroneus maximus. Winslow does not mention the action of the synergics—i.e., the action of the extensors of the wrist in the movement of closing the fist—but he states that the extensor digitorum moderates the flexion of the fingers in all the determinate degrees of action. Duchenne[25] divides the muscles into: (*a*) associations musculaires impulsives; and (*b*) associations musculaires antagonistes: (1) associations musculaires moderatrices, and (2) associations musculaires collaterales. He includes under (*a*) the synergic muscles as well as the principal movers, so that in the movement of extending the finger, which he gives as an example, he enumerates the extensor digitorum and the interossei and lumbricales and the synergic muscles, the flexor carpi, as being included in group *a*. As an example of the action of the antagonists Duchenne takes the movements of the vertebro-cranial column presiding over the erect position and states that we must consider two kinds of principal phenomena: (1) the muscular association which produces its extension; and (2) the harmony of the antagonistic muscles, which moderate and assure this extension and the normal attitude of the spine. The erectores spinæ form the muscular associations producing extension of the spine and Duchenne goes on to say that "on the harmony of the antagonist muscles or rather on the degree of force of the muscles moderating the extension or flexion of the spine depend necessarily the different degrees of the lumbo-sacral curves." He also cites as collaterals in the same position of standing the lateral movers of the vertebral spine, the quadratus lumborum to prevent the trunk inclining to one side or the other. This illustration which Duchenne gives—viz., the muscles of the vertebro-cranial column during the vertical position—does not to my mind touch the question of the action of the antagonists and the collaterals, and the same objection applies to Winslow's statement about the tibialis anticus and peronei being antagonists to the calf muscles in standing. According to my observations the flexors and extensors of the ankle and the flexors and extensors of the spine are not acting in antagonism to each other, but each in turn contracts as a prime mover to counteract and to rectify the displacing movements due to gravity and according as this displacement is forwards, backwards, or lateral the erectores spinæ, the recti abdominis, and the lateral movers of the spine respectively on the side opposite to the movement contract. It is, of course, possible to throw all the muscles of the leg into a static contraction so as to convert the leg into a rigid pillar, as in skating a large edge, but here no movement of any joint is taking place and it would not be possible to say which muscles are the prime movers and which are the antagonists, they are all probably prime movers.

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[22] The Works of John Hunter, F.R.S., edited by James F. Palmer p. 245. 1837

[23] Winslow: loc cit., p. 159.

[24] Loc. cit., p. 332.

[25] Loc. cit., p. 676, et seq

John Hunter[26] states in his Croonian lectures that there is no one known muscle in the body that we can throw into [illegible] independently of the collateral effects [illegible] expressed the opinion that partial [illegible] not exist in nature, that they are [illegible] by means of faradisation, and Dr. Hughlings Jackson has laid down that "nervous centres know nothing of muscles, they only know of movements." This in other words means that the ordinary individual has no power to make any one muscle contract by itself; he can only order a movement, he cannot pick one muscle out of a group and order that to contract; he can, on requiring to attain a certain object, order a certain movement, but the mechanism by which that movement is produced and the muscles which are required to perform that movement and the order in which they act is not known to the brain, the order for a movement is given and the movement is performed. Take the following example to which I have referred in a previous lecture. In extending the wrist by means of the extensors of the fingers against resistance the muscles come into action in a definite order which apparently cannot be altered. At first the prime movers are the extensors of the fingers and the interossei and the synergic muscles are the flexors of the carpus; later, if the resistance be increased at a certain point, the extensores carpi come to the assistance of the extensores digitorum, but apparently the individual has no power to make the extensores carpi contract before the pressure has reached the required amount. This, as I have already shown, is well exemplified in lead paralysis of the extensors of the fingers. Here, although the extensores carpi are not affected, the individual is unable to put them into action because it is not their place to extend the wrist with the fingers straight when this movement is begun by the extensores digitorum until the strain to be overcome reaches a certain amount. Another example of the intimate association between the principal movers and the synergic muscles is in the extension of the thumb. Here the extensors of the thumb are the prime movers and the extensor and flexor carpi ulnares are the synergic muscles and it is quite impossible to extend the thumb in the slightest degree and in any position of the wrist without contracting these muscles, and if the extensors of the thumb are paralysed by a peripheral lesion the wrist is adducted to the ulnar side.

Now, although the use of the ulnar muscles is doubtless to counteract the abductor action on the wrist of the extensor ossis metacarpi the contraction of the ulnar muscles is not dependent on the displacement of the wrist, for it takes place even if the thumb be extended [illegible] wrist has been passively abducted to its full extent so that there is no chance of the wrist being further abducted and consequently there is no necessity for the ulnar muscles to contract. We can only therefore conclude that the two sets of muscles are so intimately associated in this movement of extending the thumb that they act together in all positions of the wrist, and when one of the group is paralysed by a peripheral lesion the other set of muscles goes on acting as the innervation from the brain passes down, just as if the whole complex could be thrown into action. As, however, one group is paralysed the movement occurs only in the other group, showing that they are a true synergic combination. It seems, therefore, than an individual has no power voluntarily to leave a muscle out of a combination to which it belongs. Another question is, Is it possible voluntarily to add to the list of muscles which are told off for a certain movement or to supplement them when one is paralysed? For instance, it has been said that the anterior portion of the deltoid can replace part of the functions of the pectoralis major, but it must be remembered that the only function to which this could refer would be the action of advancing or adducting the humerus, but the deltoid is naturally associated with the clavicular part of the pector[illegible] the other; on the other hand, when the muscles proper to the movement are paralysed the difficulty may be overcome by a series of *other movements*. I remember seeing a case with paralysis of the flexors of the elbow in a man who managed to produce flexion of the elbow by advancing the humerus, rotating it out, and by this means letting the forearm be flexed by gravity, but here the muscles were not supplemented by other muscles but an entirely different group was thrown into action by which the desired change of position was obtained. I think, therefore, that although by exercise and training it may be possible to alter the arrangement of the muscles taking part in any movement, the inability of a patient with lead paralysis to induce the extensores carpi to act out of their proper order is against this possibility. By mechanical means, such as transplantation of tendons, first recommended by Nicalodoni[28] in 1882, it is possible to take a muscle out of one group and to put it into another and I have had the opportunity of seeing the results of some of these cases under the care of Mr. E. Muirhead Little[29] and Mr. [illegible] Orthopædic Hospital.

[illegible] above statements I think that [illegible] for every voluntary movement there is a definite number of muscles, usually two or more, which come into action in a definite order which cannot be altered and the individual members of which cannot be omitted and cannot be supplemented except perhaps by long training and exercise or by operative procedure. It will thus be seen that in every voluntary movement there must take part a minimal number of muscles below which it is not possible to go. This combination of muscles I would call the ultimate or the minimal components of a movement. Such ultimate components of the movement of extending the metacarpal bone of the thumb are the extensor ossis metacarpi pollicis, the extensor carpi ulnaris, and further on in the movement the flexor carpi ulnaris, and in the movement of extending the first phalanges of the fingers the extensores digitorum and the flexores carpi. Where in the central nervous system are these ultimate components of a movement represented? There are three places where they may be represented—in the spinal cord corresponding to Dr. Jackson's lowest level in the cerebral excitable cortex, or so-called motor area (Dr. Jackson's middle level), or in the centres postulated to preside over the so-called motor area (Dr. Jackson's highest level). With regard to the last place I have no evidence to offer at present. Representation in the spinal cord of the different muscles of the limbs has been studied both experimentally and clinically and the first question that has to be answered is whether the grouping of the cells of the anterior horns of the spinal cord is of a morphological or a physiological type. In other words, whether in the brachial enlargement the cells which supply the muscles forming the ultimate components of any one movement, as that of extending the thumb (such as the extensors of the thumb and the ulnar flexor and extensor of the carpus), are aggregated together, so that a lesion in that particular place would cause paralysis of this movement only.

I do not propose, and I have not the time, to describe all the numerous observations which have been made, but experimentally the chief ones have been done on the roots entering into the brachial and lumbo-sacral plexuses by Müller, Van Deen, and Panizza on frogs, by Peyer and Krause on the rabbit, by Risien Russell on the dog, and by Ferrier and Yeo, Forgues and Sherrington on the monkey. Anatomically the question has been worked out by Herringham and Paterson by dissection and clinically by [illegible] and many others. I also myself read a paper [illegible] Chirurgical Society in 1885 [illegible] in the spinal cord where I [illegible] with affection of the lower half of the pectoralis major, the triceps, and the latissimus dorsi only and other papers on brachial plexus paralysis.

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[26] Loc. cit., p. 243.

[27] Loc. cit., p. 676.

[28] Archiv für Klinische Chirurgie, Band xxvii., Heft 3, p. 602.

[29] Cf. Pediatrics, vol. xi., No. 3, 1901.

[30] Brit. Med. Jour., Sept. 7th, 1901.

Opinions have differed as to whether the arrangement of the cells in the anterior cornua is anatomical or physiological. The arrangement of the cells in the anterior horns and also of the cords of the brachial plexus in a physiological order is supported by a condition which I have observed and which I have already referred to—viz., the paralysis of the pectoralis major (clavicular fibres) for one class of movements but not for another. In lesions of the anterior horns and of the brachial plexus, especially of the fifth cervical root, the deltoid is paralysed, and in passively advancing the humerus it will be seen that along with paralysis of the deltoid the clavicular fibres of the pectoralis major do not make any attempt to contract when the patient makes an effort to keep the humerus advanced. On the other hand, if the patient be directed horizontally to adduct the clavicular fibres will contract in combination with the sternal fibres of the pectoralis major. The paralysis of a muscle from a lesion of a particular part of the anterior horns of the cord when it is associated with one set of muscles and not of the same muscle when it is associated with another set in a different movement would show that the anterior cornual cells had the power of grouping muscles together for a functional purpose. Against the view that each root of the plexus—and therefore presumably the segment of the cord from which it comes—when stimulated produces a well-coördinated movement by groups of muscles acting synergically is the statement of Herringham[31] that although both pronators must act together in one movement the pronator quadratus is supplied by one root and the pronator teres by a different root. The cells supplying a single muscle in the limbs extend over two or more segments. Also no segmental grouping of any of the cell columns of the spinal cord has been detected[32] and this conclusion stands in harmony with the results of the examination of the relation of the reflex movements to spinal segments.

On the whole the evidence is against the cells of the anterior cornua being arranged physiologically for a functional purpose. But although the anterior cornual cells are probably not arranged for functional purposes it does not follow that there is no power of coördination in the spinal cord. This is proved by the various complicated reflex actions which are performed when the spinal cord is cut off from the cerebral influence, reflex actions which as in the plantar reflex are made up of contractions of several joints in the limb. It has been found by Page May[33] and by Sherrington[34] that electrical stimulation of each posterior root produces a definite movement which acts reflexly through the anterior cornual cells. Sherrington also states that the group of cells discharged by spinal reflex action innervate synergic and not antagonist muscles. May's observations on the lumbar enlargement of the monkey and Sherrington's[35] observations on the brachial enlargement are of interest here. May's observations were also made by direct excitation of the spinal cord along the postero-external column: "The movements resulting from excitation of a segment of the spinal cord in the lumbo-sacral region and those from excitation of the corresponding posterior root are similar but are never quite identical. In each case flexion is the predominating effect but in the former case (spinal cord) the resulting movements are always stronger than in the latter (posterior root) and frequently movements in other parts (tail, perineum, &c.) are added." The stimulation of one posterior root causes impulses to pass out along many anterior roots, and while stimulation of the posterior roots always produced flexion, that of the anterior roots produced extension. Sherrington gives a list of the movements obtained by stimulation of all the posterior roots in the monkey, but as his results in the lumbo-sacral cord correspond very closely with those of May, I have given his observations on the brachial part of the cord only. The resulting movements obtained by Sherrington from stimulating a posterior root are synergic and not antagonistic which, as Sherrington remarks, is against the theory of the action of the antagonists which we have already discussed.

Besides the movements obtained by stimulating a posterior spinal root, are the results obtained by Sherrington[36] on the isolated length of the brachial enlargement on stimulating the skin of the palm of the hand; the reflex movements obtained were as follows: Thumb—flexion, adduction; shoulder—retraction, later protraction; wrist—extension; elbow—flexion; and fingers—flexion. It is therefore evident that even in the highest animals, as the monkey, it is possible to evoke such highly coördinated movements as the above. The mechanism by which this is effected is by the afferent fibres of the posterior root which either sends branches forwards in the grey matter of the spinal cord to the neighbourhood of the cells of the anterior horns or the cells of the posterior cornua are interposed between the posterior root fibres and the anterior cornual cells. Whether for the purposes of producing such coördinated movements as those obtained by stimulating the palmar surface the two-cell system is sufficient it is difficult to say, but it has been suggested[37] that the two cells are probably connected by the help of a mediate system of cells. The time at my disposal will not permit me to go into this question, but there is evidently in the cord itself a nervous organisation which can produce coördinated movements reflexly on stimulating the skin or the posterior spinal roots, but whether the coördination is the same as that occurring in voluntary movements it is difficult to say. I should mention that Professor Gad[38] was the first to ascribe to the posterior cornual ganglion cells in the frog the function of connecting together the cells for the flexors of the ankle, the knee, and the hip.

The representation of movements in the excitable area of the cortex cerebri next claims our attention. Time will not permit me to enumerate the various observers from the pioneers—Hitzig and Ferrier—to the present day, nor is it my intention to discuss the much vexed question whether the so-called motor, or, as it is better to call them, the excitable areas, of the cortex are motor, sensori-motor, or sensory. But that they depend on sensory impressions for the power of exciting movements is shown by the remarkable observations of Mott and Sherrington[39] who found that after dividing all the *posterior* spinal roots of the brachial enlargement of the cord the voluntary movement of grasping by the hand was permanently lost, while movements of the limb could be elicited with apparently normal facility by electrical stimulation of the part of the cortex where the movements of the upper limb are represented.

I wish particularly to refer to the results obtained by Sir Victor Horsley and myself on stimulation of the excitable cortex in the monkey[40] and the orang.[41] In the monkey we examined every two square millimetres of the excitable cortex, and we found in certain squares where the upper limb was represented that the coördinated movements of flexion of the fingers and thumb, extension of the wrist, and flexion of the elbow was obtained, and though flexion of the fingers and flexion of the wrist were also obtained in other parts of the cortex flexion of the thumb and fingers and extension of the wrist were much more frequently the rule. Another coördinated movement which was obtained was that of opening the eyes and simultaneous turning of the head and eyes to the opposite side, a combination described previously by Ferrier. The movements obtained from stimulating the excitable area of the cortex are always coördinated movements and never those of single muscles unless a movement was performed by a single muscle. The frequent association of the extensors of the wrist with the flexors of the fingers was sufficiently frequent to warrant the opinion that a synergic association existed between those two sets of muscles. The results which Sir Victor Horsley and myself obtained from our experiment of stimulating experimentally the cortex in the orang 13 years ago have been in the main confirmed by the more extensive researches of Sherrington and Grünbaum[42] who have added to the number of movements which we had found to be represented in the excitable cortex. In the one case which we examined the representation of movements was found chiefly in the ascending frontal convolution, but we also obtained movements of the index finger, of the thumb, of the orbicularis oris, of elevation of the upper lip, and of pouting of both lips from stimulation of the ascending parietal convolution. Sherrington and Grünbaum, however, failed to get any evidence that any movement was represented in the ascending parietal convolution. In the orang the movements that we obtained were nearly always single movements, such as flexion of the elbow, flexion or extension of the thumb, and they differed from those obtained in the monkey in that the sequence of movements occurring from stimulating one spot which Dr. Hughlings Jackson has termed the "march" was rarely obtained. The best example of this sequence of movements which we obtained in the orang was the movement of opening the eyes, followed by that of turning the eyes to the opposite side and ending with the movement of turning the head to that side. Professor Sherrington has been good enough to inform me that they did obtain in the experiments sequence of movements, including the combination of flexion of the fingers and thumb with extension of the wrist, and though they agree with us that the representation of the movements in the excitable cortex of the anthropoid apes is much more differentiated than in that of the monkey, they did obtain evidence of the representation there of such coördinated movements as that of grasping. The coördinated representation of muscles for a definite movement which was found to exist in the excitable cortex of the monkey is also found in the internal capsule according to the investigations by Sir Victor Horsley and myself.[43] In these experiments the internal capsule was cut across horizontally and every square millimetre of its fibres was stimulated electrically. *In almost every one of the experiments*—which were 45 in number—the movements were obtained from one square of flexion of the thumb and fingers and extension of the wrist and frequently flexion of the elbow and adduction of the shoulder. The association between the flexion of the thumb and fingers and the extension of the wrists was most marked and occurs so often that the association must be for a synergic purpose. The association between the flexors of the fingers and the extensors of the wrist has been well shown by some interesting experiments by Hering,[44] who stimulated electrically the cortex in the monkey about one millimetre above the angle of the precentral sulcus, where Ferrier and Horsley and Schäfer had produced the movements of closing the hand into a fist and where Sir Victor Horsley and myself[45] had found flexion of the fingers and extension of the wrist. Hering first stimulated this part and produced the characteristic closure of the fist. He then cut through the tendons of the extensores carpi radialis longus et brevis and he then obtained not only flexion of the fingers but also flexion of the wrist owing to the absence of the synergic action of the extensores carpi radiales. Also, when in place of dividing the tendons of the extensors of the wrist he divided the tendons of the flexors of the fingers the wrist was extended, but the fingers were not flexed when the same part of the cortex was stimulated. Hering also performed the same experiment and got the same results by stimulation on the horizontally cut surface of the internal capsule, the fibres of which we had found to give flexion of the fingers and thumb and extension of the wrist. These experiments are very strong evidence that coördination of synergic movements take place in the excitable area of the cortex.

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[31] Proceedings of the Royal Society, 1886, vol. i.

[32] Schafer's Text-book of Physiology, vol. ii., p. 795.

[33] Philosophical Transactions of the Royal Society, 1897, vol. clxxxviii., B.

[34] Ibid., 1898, vol. cxc., B.

[35] Ibid.

[36] Schafer's Text-book of Physiology, p. 816.

[37] Schafer's Text-book, vol. ii., p. 804.

[38] Festschrift der Med. Facult., Wurzburg, 1882.

[39] Proceedings of the Royal Society, 1895, vol lvii.

[40] Philosophical Transactions, vol. clxxviii., B, 1887; and vol clxxix., B, 1888.

[41] Ibid., vol. clxxxi., B, 1890.

[42] Proceedings of the Royal Society, vol. lxix.

We have now considered the question of representation of the ultimate components of a movement in the spinal cord and in the excitable cortex. What, then, is the relation between these two parts of the nervous system? We have seen that there is in the grey matter of the spinal cord a mechanism by which on stimulation of the posterior root fibres a series of coördinated movements are produced and that it is also possible in the excitable cortex to produce coördinated synergic movements. The questions are: Does the coördination of the simple voluntary movements take place in the spinal cord or in the excitable cerebral cortex only? if in the cord, is there a mechanism there which is put into action by an impulse from the excitable cortex travelling down the pyramidal tract? if there be a mechanism in the cord for receiving cortical impulses, is it identical with that for receiving reflex impulses from the skin for the production of reflex actions? lastly, if all the coördination of simple movements takes place in the excitable cortex—between which and the muscles there is no intermediate coördinating station—then is the mechanism in the spinal cord used solely for reflex actions? In speaking of the relation between the representation of simple movements in the cord and in the cortex I would ask: Can all the reflex movements which can be elicited by stimulation of the posterior roots or of the skin be reproduced voluntarily? It is well known that certain reflexes, such as coughing, can be performed voluntarily and can be inhibited and prevented from taking place, while others, like sneezing, cannot be voluntarily performed and cannot be inhibited, but with regard to the skin reflexes I do not know that the question has been raised and it occurred to me to try to *reproduce them voluntarily*. The plantar reflex can, I think, be reproduced voluntarily, though I am not sure that the order in which the muscles contract can be exactly imitated. The cremasteric cannot be reproduced voluntarily. The abdominal and epigastric reflexes in which the middle line with the umbilicus is drawn to one side reflexly by scratching with a quill pen along the side of the abdomen I was surprised to find that it was quite impossible to reproduce voluntarily.

My time is too short to go into the question whether some of these superficial reflexes are spinal or cerebral[46] in origin and why they are frequently lost in hemiplegia, but assuming that they are spinal we have coördinated movements produced reflexly by stimulating the skin and which cannot ordinarily be reproduced by voluntary effort. The fact that an ordinary [illegible] sented in the cord but was not represented also in the excitable cortex, or that if the movements obtained by exciting the cortex were also represented in the spinal cord the mechanism by which these movements were coördinated is not the same as that by which the cutaneous reflexes were brought about. At present I do not think that we are in the position to answer this question whether these reflexes are of cerebral or spinal origin, and in view of the inability to reproduce voluntarily all the cutaneous reflexes the question will have to be worked out, supposing that the movements obtained by stimulating the cortex are also coördinated in the spinal cord, whether the mechanism in the cord used for cortical impulses is identical with that used for coördinating the movements obtained reflexly by irritating the skin.

I will now pass to the relation of the excitable cortex with the coördination of simple movements. The relation of the excitable cortex to the coördination of simple movements has been discussed by various authors, but the time at my disposal will not allow me to go into the history of the subject. As some authors have raised the question whether single muscles can be put into action by a cortical pyramidal cell I may say at once that this is a condition which I believe never occurs except there be a movement in which only one muscle takes part. The results obtained by stimulation experiments and also by clinical observation of epileptic attacks and of hemiplegia due to lesions of the cortex or of the internal capsule are all in favour of the view that movements and not single muscles are represented in the arrangement of the cortical cells and of the fibres forming the internal capsule. This is the doctrine taught by Dr. Hughlings Jackson. As I therefore consider that only coördinated [illegible] are represented in the excitable cortex I will [illegible] a case which I have lately [illegible] through the kindness of Mr. J. R. Lunn. It was that of a man with recent hemiplegia—*and here in passing I would remark that I do not think much* can be learnt with regard to coördination from old cases of hemiplegia who have recovered one or two movements but in whom there are probably secondary changes in the spinal cord. In describing this case I would *remind you of what I* said in a previous lecture, that in strong movements of grasping the prime movers are the flexors of the thumb and fingers, the synergic muscles, the extensors of the carpus, and the fixation muscles, the triceps, followed by the biceps. The case was a patient suffering from hemiplegia in whom, contrary to the usual course, the return of power had commenced in the hand, and he could perform the movement of grasping, but he had no power to extend the wrist or to flex or to extend the elbow. On getting this patient to grasp with his full strength I noted that in addition to the contraction of the flexors of the thumb and fingers there was a contraction of the synergic muscles of extending the carpus and of the fixation muscle, the triceps, and that the action of the triceps was not felt to contract till a certain strength of grasp was reached. The important point is that the patient had not the slightest power to contract the extensors of the carpus when he was told to perform the movement of extending the wrist or of the triceps when he was told to extend the elbow. In this case where the lesion was probably in the internal capsule, the only fibres which were available for impulses emanating from the "arm-centre" of the cortex were those coming from that part, where the movements of grasping were *coördinated*, whereas the *fibres conducting impulses* emanating from the part of the cortex where extension of the wrist and extension of the elbow were represented were unable to pass. In other words, the patient could put into action the extensores carpi and the triceps when they form part of the movement of grasping, but he could not make either of them contract as prime movers in extension of the wrist or elbow. The next point is, Is the link between these three sets of muscles in the cord or in the cortex? Starting from the muscles and following up the motor nerves, where is the first station where the arrangement of cells is to be found by which these three sets of muscles work together? Is it in the spinal cord or in the cortex? If it be in the cortex it would mean that there must be *three sets of cells which would be coördinated* to act together for this purpose; it would also mean that there must be separate cells for the movements of the extensors of the wrist and of the elbow for their action as prime movers and separate cells for all the different combinations. Though the cortex might be large enough to contain all these cells it would be impossible to find room in the internal capsule and much less in the pyramidal tract for all the fibres that would be required. On the other hand, these three sets of muscles might be joined together under the guidance of cells in the posterior cornu and the combination would be thrown into action by one impulse from the cortex. I think that the question is best approached by examining what takes place in the movement of lateral deviation of the eyes. If the cortex in the angle of the præcentral sulcus of, let us say, the left side be stimulated, both eyes move conjugately to the right, and if the particular fibres of the left internal capsule be stimulated the same effect is produced and conversely if the cortex or the capsule be paralysed the eyes deviate to the left. These fibres passing through the left internal capsule and the crus cerebri cross to the opposite side to the nucleus of the right sixth nerve, whence fibres pass over to the part of the left third nucleus, or third nerve, which presides over the left internal rectus muscle. In this case the link between the right external rectus and the left internal rectus takes place in the medulla in the sixth nucleus, as suggested by Foville. The proof of this is that in lesions of the right sixth nucleus, without involving the third nuclei or the pyramidal tract, the same conjugate paralysis of the eyes, with deviation to the left, is produced as from a lesion of the left cortex. Now, although these two muscles, the external and internal recti, are on opposite sides of the body this conjugate movement of the eyes is as much a unilateral movement[47] as that of closing the fist, for the reason that on stimulation of the left cortex the eyes turn always to the right and not to the left. I think therefore that we are *justified in inferring that the principle which underlies the* simple movement of turning the eyes to the right can also be applied to the simple movement of closing the fist and that the link between the three sets of muscles, the flexors of the fingers and thumb, the extensors of the carpus, and the triceps, takes place somewhere below the level of the internal capsule and by analogy in the spinal cord.

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[43] Philosophical Transactions, 1890.

[44] Archiv für Physiologie, 1893.

[45] Philosophical Transactions, 1837.

[46] Schiff: Archiv für Experimentelle Pathologie und Pharmacologie, Band iii., 1874.

It has been shown by von Monakow[48] and by Schäfer[49] that the ending of the fibres of the pyramidal tract is in the neighbourhood of the posterior horns and not in the anterior horns, as was formerly thought to be the case. Von Monakow also thinks that there are intermediate cells between the anterior cornual cell and the ending of the pyramidal fibre and that this cell has the power to bring out associated movements. It therefore seems probable that the coördination or the link between the muscles entering into a simple movement takes place in the cells of the posterior cornua which are put into action by impulses coming down the pyramidal tract from the excitable cortex where these movements are represented. Whether the same coördinating mechanism in the spinal cord is used alike for reflex actions as well as for cortical impulses or whether there is a separate mechanism for each I do not think, as I said before, that we can give a certain answer. Now, as the most complicated and intricate muscular performances are only an arrangement of simple movements in some particular order it is probable that in learning some new *combination of movements, such as playing* the violin, fencing, or golfing, the simple movements represented in the excitable cortex are in response to visual or auditory impressions brought into action in their proper combination and sequence. Later the combination learnt with difficulty becomes by frequent practice automatic. But as these learnt combinations, or even such an elementary combination as walking, becomes automatic, there does not seem to me to be sufficient evidence that their seat of coördination is transferred from the brain to the spinal cord for the reason that if there ensues a lesion of the cortex or of the internal capsule all these so-called automatic movements are lost.

In conclusion, I would like to make some remarks about the *question of representation of movements* of the body of the same side as the cortex stimulated, or, in other words, if the—let us say—left cortex is stimulated what movements, if any, are produced in the left arm and leg. I do not propose to go into the question of the representation in one hemisphere of such bilateral movements as pouting of the lips, mastication, and adduction of the vocal cords. Sir Victor Horsley and myself discussed this question in our paper on the Internal Capsule[50] and the matter has been exhaustively dealt with by Sir Victor Horsley and Professor F. Gotch in their Croonian Lecture before the Royal Society.[51] The question is rather to find out what movements, if any, are produced on the same side as the cortex stimulated and the strength of current which is required to evoke these movements. The subject has been referred to by the various authors. Hitzig[52] in his first memorial remarked that if the currents were feeble their action was localised on the muscles of the opposite side of the body, but if stronger the muscles on the same side of the body were put into action. François-Franck,[53] experimenting on cats and dogs, found that weak currents produced movements of the opposite anterior limb, and if the current be stronger movements of the anterior limb of the same side are produced, but after those of the opposite side. He also found that the movements *persisted* on the two sides in spite of removal of the opposite cerebral cortex, of section of the white matter of the centrum ovale, of division of the corpus callosum, of median section of the bulb, or after section of one half of the cord on the same side as the cortex *stimulated*. He therefore considered that the movements are not caused by impulses conveyed from one hemisphere to the other and he came to the conclusion that the association between the two sides can only take place in the spinal cord by the transverse commissures. According to Unverricht[54] in dogs when the motor cortex of one side—let us say the left—was stimulated epilepsy was produced on the right side and also on the left side. He also obtained convulsions on both sides when unilateral cortical *extirpation* or hemisection of the cord was performed, and this is, he considers, a proof that the convulsions on the same side only arise by centrifugal excitation in the spinal cord itself. But after double-sided cortical extirpation it is not possible to produce clonic contractions.

As I believe that no observations of this nature have been made on monkeys I have made some researches with Sir Victor Horsley who was good enough to perform the operation of electrically stimulating under ether the motor cortex in monkeys. There were done in all *four* experiments and the general results that we obtained were as follows. 1. *On* stimulating the cortical "arm centre" by faradisation with the bipolar method when there was 16–8 centimetres distance between the coils the first movement was in the arm of the opposite side. 2. On increasing the current by diminishing the distance between the coils to about six cubic centimetres movement was obtained in the arm on the same side as that stimulated. 3. The character of the movement on the same side was usually identical with that evoked on the opposite side, but in [illegible] began with extension of the [illegible] me side by adduction of the [illegible] "leg centre" was stimulated the movements on the same side appeared rather sooner than in the case of the arm and in some cases as weak a current with the coils at 12 centimetres apart produced movements in the leg of the same side. 5. Epilepsy was obtained in all the cases in the arm of the opposite side, in three cases it was not obtained on the arm of the same side even to the coil at four centimetres, and in two out of the three cases that it was looked for in the lower limb epilepsy occurred on the same side. The first movement of the epilepsy on the same side was the same as that obtained on the opposite side. 6. On removing the excitable cortex from one hemisphere and stimulating the cortex of the other side, in two of the cases no movements were obtained on the same side as that of the cortex stimulated. In one experiment where movements of interosseal flexion of the fingers, flexion of the wrist, and pronation were obtained the most frequent movement was slow flexion of the fingers under deep narcosis, but under slighter narcosis the movements were the same as on the opposite side. In another experiment the only movement obtained on the same side was slow flexion of the elbow, whether the stimulation was applied to the "arm centre" or to the "leg centre." Also in this animal when the internal capsule was exposed and stimulated very slow flexion of the elbow was obtained on the same side when extension of the wrist and flexion of the fingers were obtained on the side opposite to the stimulated capsule; also very slight extension of the hip and knee were obtained on the same side when marked extension of the toes and flexion of the thigh and knee were obtained on the opposite side. 7. No epilepsy was obtained on the same side as the cortex stimulated when the opposite cortex was removed.

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[47] Philosophical Transactions of the Royal Society, 1890, B, p. 73.

[48] Archiv für Psych., 1895, Band xxvii.

[49] Proceedings of the Physiological Society, Journal of Physiology, 1899, vol. xxiv.

[50] Philosophical Transactions of the Royal Society, B., 1890.

[51] Ibid., 1891.

[52] Du-Bois Reymond's Archiv, 1870.

[53] Leçons sur les Fonctions Motrices du Cerveau, Paris, 1887.

[54] Volkmann's Klin. Vortr. Innere Medicin, No. 55–78, 1897–1900.

The above experiments are hardly sufficient in number to prove for certain whether the movements occurring on the same side of the body as the cortex stimulated are evoked from the opposite cortex by means of the corpus callosum or from the endings of the pyramidal tract through the commissural fibres of the spinal cord. In two of the cases after removing the left motor cortex there was no movement at all in the right arm on stimulating the right cortex, although there was marked movement in the whole of the left side and even in one case epilepsy. In another case the same movement—slow flexion of the elbow—was produced on the same side irrespectively of the place stimulated and in only one case was there any correspondence of movement between the two sides. On the whole the experiments, as far as they go, are in favour of the theory that in the monkey the movements obtained on the same side as the cortex stimulated are produced from the opposite cortex through the corpus callosum rather than through the commissural fibres of the spinal cord, and that epilepsy is not obtained in the same side of the body as the cortex stimulated if the opposite cortex be removed.

It now only remains to me to thank you, Sir, and those who have attended for their kind attention, and though I taken such a well-known subject as muscular movements I trust that I have brought forward facts which are new as well as true. I cannot conclude without expressing the hope that all students may be taught the muscles taking part in movements on the living person and not on the cadaver.

A BALL will be given on Wednesday, July 1st, at the Empress Rooms, Royal Palace Hotel, Kensington, in aid of the Oxygen Hospital, Fitzroy-square, W.

MEDICAL STUDENTS AND MADAME SARAH BERNHARDT.—On June 22nd Madame Bernhardt appeared at the Adelphi Theatre, Strand, London, W.C., in her rôle of "Marguerite Gautier," the heroine of the eternally attractive story of life and passion by Dumas *fils*. More than a month ago the gallery of the theatre had been reserved, we understand, for this night by Mr. Knox for a number of medi[illegible] after they [illegible] Bern[illegible] Mad[illegible] of hi[illegible] show[illegible] rather a demonstrative manner, but we know that that admiration was sincere.

ABSTRACT OF

The FitzPatrick Lectures

ON

THE HISTORY OF MEDICINE.

Delivered before the Royal College of Physicians of London on June 23rd and 25th, 1903,

BY JOSEPH FRANK PAYNE, M.D. OXON.,

FELLOW AND HARVEIAN LIBRARIAN.

LECTURE I.

Delivered on June 23rd.

MR. PRESIDENT AND GENTLEMEN,—It is right that before entering on the subject of these lectures I should in a few words explain the origin and aim of this new foundation. This lectureship owes its existence to the munificence of a lady, Mrs. FitzPatrick, who desires in this way to honour the memory of her late husband, Dr. FitzPatrick, Member of this College, a physician of great worth, learning, and accomplishments, and at the same time to promote an object which Dr. FitzPatrick himself had much at heart, the advancement of the study of medical history. This pious and generous gift deserves not only what have been gladly rendered, the most cordial thanks of our College, but due recognition from all who are interested in the progress of the two sciences, medicine and history, which it is designed to serve.

In assigning the History of Medicine as the subject of this lectureship the foundress has been guided by the wise advice of our eminent Fellow, Dr. Norman Moore, who was an intimate friend of our deceased Member. While, therefore, the warmest thanks of the College are due, and have been already expressed, to Mrs. FitzPatrick for her munificent gift, we must also recognise the great services of Dr. Norman Moore, to whom, it is understood, are due the conception of this scheme and the plan under which it is to be carried out. It may seem to many, as it seemed to myself, that he would most appropriately have filled the post of the first FitzPatrick lecturer. I would rather that he had been here instead of myself. It was only when I was assured that he, with generous self-abnegation, but decidedly, declined to be appointed that I felt justified in accepting the honourable task which the President and Censors have intrusted to me. I can only say that I will do my best.

It must be confessed, with some shame, that our own country has been, and is, behind most civilised nations in the bulk and value of its contributions to the history of medicine. Germany, France, and Italy have produced on this subject works both profound and brilliant which remain our standard authorities. The smaller countries, such as Holland and Switzerland, have not been behindhand, while our cousins across the Atlantic, the American physicians, are now displaying characteristic energy and zeal in the study of the antiquities of medicine. Compared with the interest shown and the positive results achieved in relation to medical history by the medical profession in all these countries our own countrymen have displayed, I fear, lamentable apathy and but little industry. In one department of the subject only, that is in medical biography, have we any important works to show; for the Roll of our College, as written by our late librarian, Dr. Munk, is certainly unequalled, if not almost unparalleled, in any foreign country. But in general it is true that while England is distinguished above other countries for the zeal with which her political, social, and literary history has been investigated and particularly for the unrivalled series of records and memorials which have been collected for these investigations, the history of science generally, and especially of medicine and of medical institutions, has been conspicuously neglected. I do not forget the excellent work which has been done of late years in connexion with the history of our great Colleges of Physicians and Surgeons and in relation to the history of our Universities. But it is remarkable that while we have done little for the history of medicine in general we have done relatively almost less for the history of medicine in our own country. The history of medicine in Britain, it is not too much to say, remains to be written. If in the standard histories of medicine, chiefly German and partly French, we may sometimes think that the history of British medicine is inadequately represented, this is not the fault of the historians. It is our fault for not having supplied them with adequate materials.

The foundation which is this day inaugurated is the first attempt to have the history of medicine taught or expounded in this country. In considering therefore what department of the vast field of medical history could be advantageously treated within the narrow limits of these two lectures, it seemed best to begin with that part which has been most neglected, the history of medicine in our own country. The range of the inquiry cannot be wide. It is limited no less by the powers and knowledge of the lecturer than by the short time at his disposal. It would be impossible to cover more than a small period of history, and that imperfectly. But if we were to attempt, however inadequately, to lay something like the first stone of the history of English medicine—to make a rough beginning which, it is to be hoped, may be revised and corrected, as well as continued, by other and better equipped investigators—this attempt, humble as it is, may be not without fruit. And the words English medicine, which it seems necessary to employ, imply a still further limitation. There was, no doubt, in all the Celtic countries a traditional popular medicine which had little or nothing to do with the subject of these lectures. In Ireland there was in early times what may be called a learned medicine also. In Wales there seems to have been something like an organised medical profession. But with Celtic medical history the lecturer is totally incompetent to deal, even in the most superficial way. It remains, then, to begin with the earliest record of the English people settled in England, our Anglo-Saxon ancestors, and to try to form for ourselves some idea of what medical science and medical practice meant in those early times. It is there that we find the actual beginning of English medicine.

Now although the history of medicine among the Anglo-Saxons has never been written from a medical point of view, a large amount of material has been collected by the labours of non-medical scholars. During the past generation nearly all, if not the whole, of Anglo-Saxon literature bearing on science and medicine has been collected and translated into modern English by a succession of learned and laborious inquirers. It is to such men as Mr. Thomas Wright, the Rev. Oswald Cockayne, the editors of the Early English Text series, Professor Earle, and others, not forgetting the important contributions made by German philologists, that we owe these important materials for medical history. The following sketch of medicine in Anglo-Saxon times is entirely based upon the labours of these eminent men. And, indeed, to one quite unacquainted, as the lecturer is, with the early English or Anglo-Saxon tongue, it could not be otherwise.

The beginning of Anglo-Saxon civilisation and learning must be dated from the introduction of Christianity into Saxon England by Augustine in A.D. 597. This must also be taken as the beginning of Anglo-Saxon medicine. For though there are some vestiges of earlier popular medical beliefs based on the heathen mythology they are comparatively scanty and unimportant. Whether the Christian missionaries from Rome introduced into England, as modern missionaries often do into heathen countries, some of the medical lore and practice with which they were familiar—that is, the medicine of the Latin world—it is very difficult to say. The earliest hint of anything like medical teaching in England is in connexion with the school at Canterbury founded by Archbishop Theodore in the latter half of the seventh century, about 670. Theodore was a Greek monk from Tarsus who with a learned colleague, the Abbot Adrian, taught both Greek and Latin with such success that many of his pupils, Bede says, knew both the ancient tongues as well as their own. This proficiency in Greek may have had some importance in the study of medicine; but the question is a difficult one. The only evidence that some medical lore was taught at Canterbury rests upon an authentic story told by Bede of one of Theodore's pupils, John of Beverley, afterwards Bishop of York. This divine (who had a reputation for working miracles) being called in to visit a nun, in whom bleeding had been followed by dangerous symptoms, found that she had been bled on an improper day. He severely rebuked those who had ordered the bleeding and quoted some cautions on the subject which had been taught him by his master, Archbishop Theodore. This is an isolated fact, but it shows that learned men among the Anglo-Saxons had some pretentions to medic knowledge and imparted it to their pupils. It is n clear that this was true of the greatest name in t Anglo-Saxon church, the Venerable Bede (died 735) who learning was as remarkable as his piety and zeal. Be wrote beside theological and historical works some scie tific treatises "On the Nature of Things," and "On Times or seasons, dealing chiefly with astronomy and meteorolog There is nothing distinctly medical in his known writing but a manuscript fragment in the British Museum of lat date and doubtful authenticity contains certain rules as the dangerous days for bleeding which are attributed to hi This fragment is so late as to have no authority, but the fa that it refers to a subject which Bede's episcopal pred cessors, Theodore and John of Beverley, thought of gre importance, and one not unconnected with the subject of h known works, gives it some plausibility. In Bede's writin there are references to "leeches" or physicians, showing th there was something like a regular medical profession.

After this the only documents bearing on medicine England belong to the kingdom of the West Saxons a the first date of any importance relating to medicine is th of King Alfred the Great (848–901). This great ruler, w took as much pains to educate his people as to give the laws or to make them successful in war, translated himse and caused to be translated from the Latin into Englis books of history and philosophy; but nothing bearing directl on medicine. By this, however, he set the example which wa afterwards followed in the translation of purely medica works into the vernacular. He kept up relations with Ital and the East even as far as India, by which books of a kinds, probably some medical, were brought into England It appears from an Anglo-Saxon MS. that the patriarc Helias of Jerusalem sent to Alfred from the Holy Lan medical prescriptions relating to such drugs as scammon tragacanth, and others, the produce of Syria, and also th celebrated Greek compound medicine, the "Theriaca Andromachus," or "Triacle," which could not have bee made in England. This shows some interest on Alfred's pa in the progress of medicine.

Soon after the death of Alfred is the date of the mos important Anglo-Saxon medical work which has been pre served. It is a "Leech Book," or Treatise on Medicine i two books. A third book which is appended evidently doe not belong to it. By an inscription at the end we learn tha it was the property of one Bald who ordered one Cild t write it. The presumption is that Bald was a "leech" o physician and that Cild was the writer, but whether th writer was merely the scribe or the author—that is, compiler—is not quite clear. This book is a sort of treatise on diseases, beginning with the head and going down to the feet, as was the custom of the later Greek physicians and almost universally followed in the Middle Ages. Many diseases are mentioned, but the account of their pathology and symptoms is very meagre. The most important passages bearing on these subjects—making, according to the editor, Mr. Cockayne, perhaps one-fourth of the book—are borrowed without acknowledgment from later Greek physicians, especially from Alexander Trallianus and in a few cases from Paulus Ægineta. The question naturally arises whether the Anglo-Saxon compiler read these authors in the Greek or in a Latin version. For various reasons which it would take too long to enumerate it is probable that the latter supposition is correct. Some late Latin writers, such as Marcellus Empiricus and Plinius Valerianus, were also laid under contribution, though none of these authors, Greek or Latin, are named except Pliny. In the book two Anglo-Saxon leeches, Dun and Oxa, are mentioned and reference is made to "the leeches" generally, so that it supplies evidence of the existence of a regular medical profession. The patriarch Helias is the only other person quoted.

The treatment of disease is generally spoken of at greater length than the signs and symptoms. Many prescriptions are borrowed from the Greek physicians but many cannot be thus traced. A conspicuous feature is the great abundance of herbal medicines prescribed. The Anglo-Saxons were acquainted with a large number of native herbs—a knowledge which could not have been acquired from their Greek authorities—and used them empirically along with some exotic drugs. Their pharmaceutical methods were exceedingly simple, herbs being boiled in water or soaked in beer, vinegar, or milk, and sometimes mingled with honey. Ointments were made with butter. The surgery of the "Leech Book" is extremely rude. Wounds were treated with decoctions or poultices of herbs and with honey. For broken bones similar applications were to be used and the limb was to be wrapped in softened elm bark. In one place a splint is spoken of. Amputation is advised only for gangrenous limbs, but no details are given as to the method of performing it. An operation for hare-lip is described but hardly in such a way as to show that the writer had actually performed it. Blood was taken by venesection, cupping, and scarifications. Various kinds of baths are recommended and carefully described. Beside these methods of treatment the "Leech Book" contains a number of charms, incantations, and magical rites, but not so many as some others of the Anglo-Saxon works. The discussion of this subject is deferred.

The "Leech Book" of Bald is found in one manuscript of the British Museum and has been printed in the collection called "Anglo-Saxon Leechdoms" (Vol. II.), edited by the Rev. O Cockayne and published in the "Master of the Rolls Series." The general impression derived from this book, which is the only example of the professional manual of the Anglo-Saxon leech, is that it shows little or no originality but a praiseworthy zeal in trying to obtain the best available knowledge on the subject, new or old, English or foreign. There is nothing in any continental literature of the same period or for some time later at all comparable to it. Indeed, out of Italy there was hardly any scientific literature and none at all in any vernacular language. In this respect the medical literature of the Anglo-Saxons was as much without a rival as their general literature. The misfortune was that this compilation was made when the level of European medicine was at its very lowest. The works of the ancients were mostly inaccessible and nothing else had arisen to take their place. The school of Salerno, the oldest medical school in Europe, had not yet come into prominence.

The next important book which requires notice is the Anglo-Saxon translation of what is known as the Herbarium of Apuleius, a book of medical botany, illustrated with coloured figures. Of this translation no less than four manuscripts have survived, a remarkable number considering the scanty remains of Anglo-Saxon literature which exist and showing that the book enjoyed great popularity. The most remarkable manuscript is one in the British Museum which must originally have been a magnificent book decorated with coloured drawings. It is believed to have been written between 1000 and 1050 A.D. From this and other manuscripts the text has been printed in the Rolls series, edited by Mr. Cockayne with a version in modern English as Vol. I. of "Anglo-Saxon Leechdoms." The original work is in Latin and is attributed to a possibly fictitious writer called Apuleius Platonicus. It is believed to date originally from about the fifth century, but no copy anything like so old as this is known. It was for centuries the most popular botanical book in Europe, being multiplied in numerous Latin manuscripts up to the fifteenth century when it was first printed. Associated with this book in a large number of Latin manuscripts, as in theAnglo-Saxon version, are three other short Latin treatises, one on the plant Vettonica or Betony, attributed, probably falsely, to Antonius Musa, the physician to the Emperor Augustus. There are also a series of descriptions of medical plants, professedly taken from Dioscorides, and a treatise on medicines obtained from animals bearing the name of Sextus Placitus, a Roman physician of the fourth century, all with coloured figures. Who first united these four books in one collection is not known, but taken together they formed a sort of compendium of medical natural history. The essential feature in all of them was the series of illustrations which, as the actual descriptions of the objects are few and meagre, served, or were intended to serve, for the identification of the plants and animals named by the original writers. A large number of Greek and Latin synonyms are given for most of the plants and an enumeration of the diseases for which they were supposed to be useful. All this constitutes, according to our ideas, a very poor book, whether from the botanical or medical point of view. The accounts of medical uses are meagre and often trivial. Even the illustrations, having been handed down by a long succession of copyists, with ever-increasing remoteness from the original objects, are conventional in drawing and often quite unrecognisable in their present form, whatever they may have been in the original. The whole bears no comparison with the genuine work of Dioscorides on "Materia Medica" which is the great treasury of ancient science relating to the natural history and uses of drugs. Nevertheless, the Anglo-Saxons showed their usual intelligence and zeal for knowledge in translating it. It was the best book on the subject they could find, they turned it into their own vernacular tongue and carefully copied the precious illustrations by which they, no doubt, hoped to identify the plants of their own woods and fields and thus to find the key to their virtues and uses as understood by the ancients. This was a distinct step towards the advancement of botany in England, a definite scientific achievement, and as such without a parallel then, or for some time after, in any other European country.

With regard to the coloured figures of plants which occur in the Anglo-Saxon manuscripts, and most conspicuously in that splendid book already spoken of, a few words must be said. It may cause surprise and be thought a fault that the artists did not supply original figures of the plants described. Anglo-Saxon art, which had reached so high a level in decoration and showed considerable skill in drawing the human figure, might be thought to have been equal to this task. But to supply new figures would not have carried out the object which they had in view, which was identification. The artists therefore contented themselves with copying the traditional figures which had already passed through the hands of many generations of copyists. Rude as these figures are, they represent a real survival of old Græco-Roman art and even in their most degraded form preserve some of the features characteristic of classical art in general. The figures are usually nearly symmetrical on both sides and show a sense of balance and proportion which may be fairly regarded as classical. Also they are not so much portraits of individual plants as diagrams constructed from a general knowledge of the object. If [illegible] in the various manuscripts w[illegible] the same, though with occasional varieties, the figures of the same plant in different manuscripts being sometimes quite unlike. The temptation was for a clever artist to treat the figure from a decorative point of view rather than as a mere transcript from nature. Occasionally he allowed his imagination free play and produced figures which are plainly fabulous. These features are clearly seen in some copies now exhibited of the drawings in the manuscripts.

This seems to be the opportunity to say something about the botanical knowledge o[illegible] not be supposed that [illegible] native plants from Latin and Greek sources. A large number of medicinal herbs are named in the various prescriptions of the Leechdoms which are not included in the translated Herbals. We have another source of knowledge in the "glossaries" which give the Anglo-Saxon equivalents for Latin and Greek names of plants. Of these glossaries no less than six written before the middle of the twelfth century, which may be taken as the extreme limit of Anglo-Saxon literature, have been preserved. They show the keen interest which our forefathers took in the knowledge of herbs. From these and other sources Mr. Cockayne has [illegible] the Anglo-Saxon names of wo[illegible] l to between 700 and 800. Or [illegible] of Latin names, synonyms, [illegible] not strictly belong to the period now considered about 500 remain which are either pure English names or Latin and Greek words so altered as to have become vernacular. This is a very large number. The Herbarium of Apuleius with the additions from Dioscorides gives only 185 names and of these some were exotic plants which the Anglo-Saxons could not identify. Evidently, then, a large surplus remains which represents an original English nomenclature of native plants. That the Anglo-Saxons had 5.0 botanical names would not necessarily show that they knew 500 species, for some may have been inaccurate or synonymous, but it is evidence of a [illegible] than they have [illegible] science seems to [illegible] than in mediæval [illegible] French names and [illegible] agree with the hard saying of Professor Earle that "there was a great decadence of botanical knowledge in England between the eleventh and the sixteenth centuries."

In the next lecture some other books of the Anglo-Saxon medical library will be considered and also the charms and magical rites which occur in many of them.

ON THE DIAGNOSIS OF THE CAUSE OF JAUNDICE.[1]

BY SIDNEY PHILLIPS, M.D., F.R.C.P. LOND.,
PHYSICIAN TO ST. MARY'S HOSPITAL AND LECTURER ON MEDICINE IN THE MEDICAL SCHOOL; SENIOR PHYSICIAN TO THE LONDON FEVER HOSPITAL.

OBSTRUCTION in the common bile-duct leads to absorption of bile from the biliary passages and consequent jaundice. This form of jaundice has been termed "obstructive"; and on the assumption that obstruction giving rise to jaundice could only occur in the common duct, all cases of jaundice in which there was no obstruction in the common duct have been termed "non-obstructive." It has, however, been shown that a catarrhal condition of the lining membrane of the small intrahepatic ducts may also produce jaundice which is as much "obstructive" as that produced by obstruction in the common duct. Indeed, most cases of jaundice (if not all) appear to be "obstructive," the obstruction in some being in the small intrahepatic ducts, in others in the common bile-duct, and if the terms "obstructive" and "non-obstructive" are still used in cases of jaundice it must be with the understanding that they refer only to the presence or absence of obstruction in the common bile-duct.

Whatever terms are used the first step in the diagnosis is to determine whether or not there is obstruction in the common bile-duct. Such obstruction is shown by (1) absence of bile from the stools; (2) enlargement of the gall-bladder; and (3) enlargement of the liver.

1. Absence of bile from the stools is the most trustworthy; the other two conditions are confirmatory signs. When the stools are white in cases of jaundice the common bile-duct is obstructed. When they are not white there is no such obstruction. Walker[2] points out that the motions may become colourless from defective pancreatic secretion; in these cases, however, there is no jaundice.

2. Enlargement of the gall-bladder arises from its distension when the common duct is occluded. It may be too slight to be detected at first, but in long-standing cases and where the occlusion is complete it may become enormous and generally can readily be felt through the abdominal wall.

3. Enlargement of the liver arises whenever the exit of secreted bile is prevented. The amount of enlargement varies with the duration of the obstruction and in different individuals. It may appear to be greater than it really is from pushing forwards of the liver by the distended gall-bladder. The enlargement may be so great that doubt may arise as to whether it is not due to primary disease of the liver, but if the surface of the organ is smooth and no nodules can be felt in its substance no degree of enlargement need deter us from regarding it as due to, and confirmatory of, obstruction of the common duct.

The causes of obstruction in the common duct giving rise to jaundice are—1. Morbid conditions involving the duct or its orifice in the duodenum: (*a*) catarrh; (*b*) duodenal ulcer; (*c*) duodenal cancer; and (*d*) stricture of the duct. 2. Foreign bodies in the common duct: biliary calculi, pancreatic calculi, and parasitic structures. 3. Pressure on the duct from without: (*a*) by perihepatitis and resulting adhesions; (*b*) by tumours, aneurysms, or enlarged glands in the portal fissure; and (*c*) by disease of the pancreas.

Jaundice from catarrhal obstruction of the common bile-duct.—Catarrh involving the orifice of the bile-duct in the duodenum prevents bile from flowing into the intestine and jaundice results. When jaundice comes on rapidly with white stools, with slight enlargement and tenderness of the gall-bladder and liver, but without pain or ascites, the probability is that the jaundice is due to catarrh, especially if there have been precedent symptoms of gastro-duodenal indigestion (nausea, flatulence, &c.), with or without evidences of rheumatism, gout, or secondary syphilis. The diagnosis of catarrhal jaundice is not based on any special distinctive symptom but rather on the known frequency of its occurrence, together with absence of evidence of any other condition which could produce jaundice. Catarrhal jaundice rarely lasts more than five or six weeks, but during this time the gall-bladder may become considerably distended and the patient may become very deeply jaundiced and emaciated. If the jaundice does not commence to lessen after the lapse of five or six weeks and bile to reappear in the stools, the diagnosis of simple catarrh must be abandoned, the probability being that some more serious condition, such as disease of the pancreas, is present.

Jaundice from duodenal ulcer can only arise when the ulcer involves the opening of the common duct in the duodenum; it is therefore rare. Jaundice with white stools and no ascites, coming on after the patient has suffered for some time from epigastric pain and tenderness, with hæmatemesis or melæna, is ascribable to duodenal ulcer. (The same symptoms may result from cancer of the pancreas, but then the jaundice usually precedes any hæmorrhages and possibly the tumour of the pancreas can be felt.)

Jaundice from duodenal cancer.—If in addition to the symptoms of duodenal ulcer just enumerated, a tumour can be felt in the duodenal region, or if the lymphatic glands in the abdomen, neck, or elsewhere are enlarged, the jaundice is probably due to duodenal cancer. (Cancer of the head of the pancreas is even more difficult to exclude here than in the case of simple duodenal ulcer, but in cancer of the pancreas the jaundice usually precedes the melæna and there may be other evidences of pancreatic cancer such as will be described later.)

Stricture of the common bile-duct.—Jaundice coming on at birth with absence of bile from the stools is ascribable to congenital stricture of the duct, and is soon fatal. Acquired stricture of the duct is rare and seems most commonly to result from previous passage of gall-stones, but cases without any evidence of previous gall-stones have been recorded by George Johnson, T. Holmes, Moxon, and myself.[3] Jaundice can only be attributed to stricture of the common duct when all other possible causes can be excluded.

Jaundice from calculi or other foreign bodies in the common bile-duct.—When jaundice, with white stools and enlargement and tenderness of the gall-bladder and liver, comes on a few hours after a paroxysm of acute abdominal colic, with retching or vomiting, and may be pyrexia, such jaundice is usually due to a foreign body in the common bile-duct, and in the absence of evidence of hydatids of the liver such foreign body is presumably a biliary calculus (A pancreatic calculus impacted at the orifice of the common bile-duct may produce almost identical symptoms though probably with less severe pain, as in the case by A. P. Gould, published in the Transactions of the Clinical Society of London for 1889.) Jaundice must no be ascribed to impacted gall-stone unless there has bee an attack of colic *at some time*; for though a calculus ma become impacted in the duct without an *immediately* preceding attack of pain, yet it is excessively rare for a stone t become so impacted unless calculi have entered the biliar passages and produced colic at some previous date—it ma be long before. Jaundice must not be too readily attribute to gall-stones if the evidences of their existence occurred a some long previous date, for such jaundice may be due t cancer of the liver or pancreas, which are not infrequentl preceded by calculi in the biliary ducts.

Jaundice from compression of the common duct by perihepatitis with adhesions.—Perihepatitis seldom occurs as disease alone, but is met with in association with hepatiti (especially syphilitic hepatitis), with growths in the liver c portal fissure, with gall-stones in the biliary passages, or wit gastric or duodenal ulcer. As the vena portæ as well a the duct may be compressed by the perihepatic bands, ascite is often produced as well as jaundice. When jaundic occurs without bile in the stools, but with ascites, paroxysma attacks of local pain and pyrexia, together with evidences c some of the conditions above enumerated with which perihepatitis is usually associated, we are justified in attributin it to perihepatitis. When similar symptoms occur, bu without ascites, the diagnosis is more difficult, the mai difficulty being to decide whether the symptoms are due t gall-stones or to perihepatitis, for both give attacks c pyrexia, local pain, and jaundice with colourless stool The more severe the attacks of pain and the more intense th jaundice, the greater the probability of calculi; but ver often perihepatitis and gall-stones coexist and many of th symptoms met with in cases of gall-stones are due t associated perihepatitis.

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[1] A lecture delivered at St. Mary's Hospital on Nov. 30th, 1902.

[2] Transactions of the Royal Medical and Chirurgical Society, vol. lxii., p. 257.

[3] Transactions of the Clinical Society of London, 1888.

The following cases exemplify the resemblance between the symptoms produced by perihepatitis and those producible by gall-stones.

CASE 1.—A married woman was admitted into St. Mary's Hospital in 1878 for enlargement of the liver; after that she was well till 1889 when she came to me as an out-patient with pain, jaundice, and colourless stools; she improved temporarily but came again into the hospital in August, 1890, with jaundice, colourless stools, and epigastric pain and tenderness. No enlargement of the liver could be detected. In October the abdomen was opened by Mr. A. J. Pepper; no gall-stones were found but the gall-bladder was shrunken and there were numerous tough perihepatic inflammatory bands. These were divided as far as was deemed prudent and she was greatly relieved. I saw her again in May, 1894, with large syphilitic nodes on the legs and occasional smarting pains in the liver region but no jaundice. Syphilis here seemed to have caused perihepatitis and jaundice simulating gall-stones, but there was never pain severe enough to be called "colic."

CASE 2.—The patient was a married woman, aged 46 years, who had for five years suffered from attacks of biliary colic and in February, 1900, she had severe rigors and high temperature, with deep jaundice, colourless stools, and pain in, and enlargement of, the gall bladder. I saw her in June,
1900, with Mr. E. Moon
bladder was made by M
and puckered, adherent to the stomach by inflammatory bands, and two calculi in the common bile-duct. Some of the adhesions were divided but there was a widespread matting of tissues around the duct, which it was not thought wise to interfere with, and the calculi were too firmly impacted to remove. The wound healed and the fever and pain soon subsided. The patient was greatly relieved by the division of the adhesions and eventually lost her jaundice.

Jaundice from compression of the bile-duct by tumours in the portal fissure.—Any tumour pressing on the common bile-duct sufficiently to occlude it will press also upon the adjacent vena portæ; hence in such cases there is always ascites as well as jaundice. If a tumour can be detected in the region of the portal fissure and there is ascites as well as jaundice, with colourless stools, there need be no hesitation in ascribing the jaundice to the presence of the tumour. When the same symptoms occur without any tumour being detectable, but nodules of carcinoma can be felt in the liver, we may infer that the jaundice results from pressure on the bile duct by glands in the portal fissure, secondarily affected. The physician should never attribute jaundice with colourless stools, but without ascites, to cancer of the liver. Cancer of the liver does not itself press upon the bile-duct (except in very rare instances) and any obstruction of the bile-duct in cases of cancer of the liver is produced by pressure of secondarily affected glands in the portal fissure, which are certain to produce ascites if they produce jaundice. Even if nodules of carcinoma can be felt in the liver jaundice with white stools is not to be ascribed to that disease unless there be also ascites, but is probably the result of cancer of some other organ such as the pancreas to which the nodules in the liver are secondary.

Jaundice from disease of the pancreas is more common than might be inferred from the little stress until recently laid upon it. From the anatomical position of the gland tumours or enlargements of the head of the pancreas, unlike other tumours or enlarged glands in the portal fissure, can press upon and occlude the common bile-duct without compressing the vena portæ. Hence disease of the pancreas is capable of producing jaundice with colourless stools but without ascites—symptoms closely resembling those producible by gall-stones but distinguishable from them by the absence of severe colic. When jaundice comes on, either slowly or quickly, with white stools, without pain, or if with pain without the acute paroxysm of biliary colic or of perihepatitis and without the indications already described of duodenal ulcer or cancer, the jaundice is due either to disease of the pancreas or to catarrh of the common duct. If a tumour can be felt in the position of the head of the pancreas catarrh is excluded. Pain, too, would also exclude mere catarrh. If there is no tumour and no pain the diagnosis between catarrh and pancreatic disease is impossible for the time, but if the jaundice persists for over six weeks the presumption becomes great that it is not due to simple catarrh and is in all probability a result of disease of the pancreas. Confirmatory evidences of pancreatic disease may be present.

The enlargement of the gall-bladder which results from pancreatic as from all other forms of obstruction of the common duct is apt to be more marked in pancreatic growths than from other causes, such as gall-stones, for the obstruction from pancreatic disease is often more absolute than from gall-stones and, again, the latter often set up inflammatory adhesions about the gall-bladder which limit its distension. Bard and Pic[4] deny that enlargement of the liver occurs in cases of pancreatic obstruction of the duct, but Chopin and Molle[5] have shown that the liver may enlarge in this as in all other forms of obstruction of the common duct, and the post-mortem examinations in some of my own cases have shown that the liver may become of enormous size. In late stages there are often secondary nodules of cancer in the liver. Ascites is more often absent than present but may arise in the late stages of pancreatic disease. A tumour may be sometimes felt but a small growth in the head of the pancreas quite incapable of being felt through the abdominal wall may produce jaundice. In three of 12 cases of pancreatic growth no tumour could be felt. Fat in the stools sometimes occurs. Œdema of the feet without ascites may result from pressure on the inferior vena cava. Pain is usually, but not always, felt; it was absent in three of 12 cases. Melæna is not infrequent—it occurred in four of 12 cases; in one the disease had ulcerated into the duodenum. Secondary growths may occur in the skin or in the mediastinum (two cases). Glycosuria appears to be most common in non-malignant cases but it may occur in carcinoma of the pancreas, as in a case recorded by Shaw and Perry.[6] It is said that pancreatic obstruction prevents carboluria when salol is administered by the mouth. In one case now in Victoria Ward with presumably cancer of the pancreas, salol produced carboluria immediately. (Subsequently the necropsy of this patient showed obstruction of the bile-duct by cancer of the pancreas.) This and other cases of proved pancreatic obstruction have shown that the administration of salol is worthless as a test of pancreatic obstruction.

The statement has been made that cancer of the pancreas, unlike cancer of the liver, does not appear to be predisposed to by calculi in the biliary passages, but in two of my 12 cases pancreatic cancer as well as biliary calculi were found post mortem and in a case recorded by Shaw and Perry there was evidence of the same association. A previous history of gall-stones therefore in no way militates against the diagnosis of pancreatic cancer as a cause of jaundice. The nature of the disease of the pancreas suspected to be the cause of jaundice must be adjudged on the grounds which guide us generally, any solid tumour detectable in the position of the pancreas or any enlargement of cervical lymphatic glands pointing to malignancy.

CASE 3. *Carcinoma of the head of the pancreas producing jaundice and œdema of the feet.*—A man, aged 51 years, suffered from jaundice in August, 1899, and was sent to me at St. Mary's Hospital by the late Mr. J. C. Barr on Jan. 30th, 1900. He had jaundice. The stools were white: the liver was large and smooth, reaching to the level of the umbilicus, and there was a *tense pear-like gall-bladder* No other tumour could be felt. There were no pain and no ascites but there was *swelling of the feet and ankles.* An operation by Mr. Pepper, on the possibility of the diagnosis being wrong, showed an irremove-
organ. The wound healed

reas with calculi in the gall-bladder.—A widow, aged [illegible] years, came into St. Mary's Hospital on March 7th, 1902, complaining of pain in the abdomen, the hip, and the right shoulder. There were occasional vomiting, jaundice with colourless stools, no ascites, a tumour palpable in the epigastrium, and slight pyrexia. Laparotomy was performed by Mr. Pepper and showed carcinoma of the head of the pancreas and secondary nodules in the liver She had been a patient in the hospital eight years before for jaundice and suspected gall-stones At the necropsy on April 6th numerous small calculi in the gall-bladder and cancer of the pancreas with secondary nodules in the liver were found to be present.

CASE 5 *Cancer of the pancreas and calculi in the gall-bladder.*—A female, aged 54 years, came under my care at St. Mary's Hospital on March 22nd, 1901, with severe epigastric pain and a much distended gall-bladder but no jaundice; she wasted rapidly, but soon went out of hospital, only to return in June, 1901, with deep jaundice, colourless stools, a tender tumour in the epigastrium, and enlargement of the cervical lymphatic glands. She died on July 22nd and there were found carcinoma of the head of the pancreas and numerous calculi in the gall-bladder. Here enlargement of the gall-bladder resulted from the calculi and later jaundice from the cancer of the pancreas.

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[4] Revue de Médecine, 1902.

[5] Loire Médicale, 1903.

[6] Op. cit., Case XII.

CASE 6. *Carcinoma of the pancreas with jaundice and melæna.*—A married woman, aged 46 years, was quite well till one morning in the early part of May, 1902, she found that she was jaundiced. About the middle of June attacks of vomiting commenced. She came under my care at St. Mary's Hospital on August 11th with deep jaundice and colourless stools. No tumour could be felt but the liver was very hard and smooth and its sharply defined lower edge could be felt below the level of the umbilicus. She had no pain except at the tip of the right shoulder; there had never been any pain in the lower region. No ascites existed. Salol given by the mouth produced carboluria in a few hours with great aggravation of the toxic symptoms from which she was then suffering; it was at once discontinued. She slowly got worse and twice passed blood by the rectum towards the end of the illness. The enlargement of the liver increased and the gall-bladder could be sometimes felt. She died comatose on Dec. 8th. The necropsy showed a hard mass of cancer in the head of the pancreas which had commenced to ulcerate into the duodenum. The liver was very large and hard and gorged with bile and as the latter ran out the liver rapidly lessened in size. The gall bladder was much distended but its tip only just came beyond the liver edge.

Jaundice without obstruction in the common bile-duct occurs in many conditions and for reasons not well understood. That it is due to a failure of the liver to secrete bile is disproved by the fact that when the liver fails to secrete bile no bile is secreted and therefore no jaundice results. The theory that the jaundice is a result of excessive absorption of bile from the intestines has also been disproved. In many cases the jaundice appears to be due to absorption from the small intrahepatic ducts of bile which has become more or less stagnant owing to a catarrhal condition of the epithelium lining these ducts set up by some poison in the blood. No explanation, however, quite satisfactorily accounts for the appearance of jaundice in all the conditions in which it occurs. They may be enumerated as follows: (1) poisons circulating in the blood, such as phosphorus, toluylendiamin, &c.; (2) toxins resulting from certain diseases—yellow fever, the exanthemata, pyæmia, &c.; (3) congestion of the liver; (4) hepatitis; (5) acute atrophy of the liver; and (6) conditions of the nervous system.

Jaundice from poisons.—Though we cannot satisfactorily account for the mode of causation we may set down jaundice as due to phosphorus poisoning if there is evidence that this substance has been taken.

Jaundice resulting from yellow fever, &c.—When jaundice occurs in the course of any of the diseases already enumerated we may similarly attribute the jaundice to the toxins of the disease.

Jaundice from congestion of the liver.—When there is jaundice with bile in the stools and the liver becomes enlarged and tender, with perhaps nausea or vomiting, we may infer that the jaundice is due to congestion of the liver, especially if it occurs in a tropical district.

Jaundice from hepatitis.—When the liver is much enlarged and smooth or "hobnailed" on its surface, or is much contracted, and especially if there are evidences of alcoholism, such as morning retching, with or without signs of portal obstruction, any jaundice which occurs with presence of bile in the stools may be set down as due to the cirrhosis and is, indeed, a confirmatory evidence of it. The form of cirrhosis in which jaundice is most common is the unilobular form with a large smooth liver and no ascites, but it may occur in the large liver with ascites, or in cases where the liver is contracted with or without ascites. Probably in most of such cases the jaundice is due to a catarrhal state of the small ducts.

CASE 7.—A man, aged 50 years, who denied alcoholic habits but who was afterwards ascertained to have drunk a bottle of whisky a day, had been in Africa a good deal but had no signs of malaria. In November, 1900, he began to feel ill and in February, 1901, became jaundiced with pain in the umbilical region. He was admitted under my care at St. Mary's Hospital on April 15th deeply jaundiced; there was bile in the stools and urine; there was no ascites. The liver was very hard, quite smooth, and reached down to the level of the umbilicus. He had lost two stones in weight in six months, but cancer of the liver was excluded by the smoothness of the surface of the liver and hepatitis was diagnosed. He remained about the same till May 7th, when he became drowsy and soon afterwards had a purpuric eruption over the body and legs. He went out of hospital on May 30th but I saw him again with his medical man at home dying comatose from jaundice with copious ascites.

Upper Berkeley-street, W.

NOTE ON THE PERSISTENCE OF THE GRUBER-WIDAL REACTION IN CONVALESCENCE FROM TYPHOID FEVER.

BY H. S. D. BROWNE, B.A. CANTAB., L.R.C.P. LOND., M.R.C.S. ENG.,
CLINICAL ASSISTANT IN THE THROAT DEPARTMENT, ST. THOMAS'S HOSPITAL;
AND
K. E. CROMPTON, B.A., M.B. CANTAB.,
LATE HOUSE PHYSICIAN TO ST. THOMAS'S HOSPITAL

CURSCHMANN, in Nothnagel's "Encyclopædia of Practical Medicine,"[1] makes the following statement: "Among the sources of error in serum diagnosis the important observation should, in conclusion, be considered that the agglutinating action of the serum may persist for months, and even years, after recovery from an attack of typhoid fever" (Lichtheim, C. Fränkel, Stern). If this observation holds good for the majority of cases the presence of a serum reaction in an old typhoid fever patient with a fresh attack of fever of doubtful nature might easily lead to an error in diagnosis. But the consideration of a large number of cases investigated by other observers leads one to the conclusion that the persistence of the serum reaction after the first few months of convalescence is the exception rather than the rule.

Widal[2] examined 40 cases, of which 11 gave a positive reaction, one giving a reaction eight and a half years afterwards with a dilution of 1 in 1800. Fison[3] examined 21 cases from three months to eight years after attacks, of which 18 gave positive reactions. Renard[4] examined 104 cases, 35 of which gave positive reactions, five of these being 20 years after the attack. Elsberg[5] investigated 36 cases and found the reaction present in eight cases one month after convalescence. He also found that the reaction had disappeared in one case in the fifth week of convalescence and in two cases in the third week of convalescence. It is interesting to note that the above observers used very different dilutions in their experiments. Thus Fison used 1 in 2 and 1 in 9 with a 30-minute time limit. Renard used 1 in 10 except in one case, when he obtained a reaction in 1 in 40. Cabot makes no mention of the dilution used by Widal.

We have examined the serum of all the cases of typhoid fever treated at St. Thomas's Hospital from 1899–1901 which we have been able to reach by letter. In this series of cases the typhoid bacilli used were the descendants of a single colony obtained from the case of multiple typhoid abscesses operated on by Dr. H. C. Jonas in St. Thomas's Home and reported by him in conjunction with Dr. C. G. Seligmann.[6] From 18 to 24 hour old agar cultures were used by us. These were emulsified with tap water and the emulsion was passed through filter paper in every case to avoid false clumps. Each emulsion was carefully examined before use and those possessing the highest degree of motility were selected. A control of the emulsion used was examined in every case. A dilution of 1 in 10 was first used in all cases. When any indication of reaction occurred 1 in 20 and 1 in 50 dilutions were proceeded with; the time limit was half an hour in all cases. The sera were thus put to exactly the same test as that to which they had been subjected in the original attack. No cases were selected which had not previously given the

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[1] Vol. i., p. 430.
[2] Cabot: Serum Diagnosis of Disease.
[3] Brit. Med. Jour., July 31st, 1897.
[4] Thèse de Paris, 1897.
[5] New York Medical Record, vol. ii., p. 510.
[6] THE LANCET, Oct. 4th, 1902, p. 931.

TABLE SHOWING THE SERUM REACTIONS IN 68 CASES AT VARIOUS PERIODS AFTER RECOVERY FROM TYPHOID FEVER.

Months after the attack.	Total number of cases.	Positive reaction.	Negative reaction.	Details of the negative cases showing indication of reaction.
1–6	2	1	1	One case with a dilution of 1 in 10 gave loose clumps with very little loss of motility.
7–12	11	1	10	One case with a dilution of 1 in 10 gave well-marked clumps with incomplete loss of motility; a 1 in 20 dilution gave a few clumps with no loss of motility. One case with a dilution of 1 in 10 gave a complete reaction; a 1 in 20 dilution gave a few clumps with no loss of motility.
13–18	15	—	15	Two cases with a dilution of 1 in 10 gave clumping in five minutes [illegible] of 1 in 20 there were loose clumps and slight loss of motility. [illegible] clumps with very slight loss of motility; a dilution [illegible] absolutely negative. One case gave a complete rea[illegible] loose clumps with slight loss of motility, and on[illegible] dilution of 1 in 10 gave well marked clumps with [illegible] negative.
19–24	17	2 (doubtful)	15	[illegible]
25–30	7	—	7	One case with a dilution of 1 in 10 gave a complete reaction; one of 1 in 20 clumped in 15 minutes; the loss of motility was incomplete in 30 minutes; and one of 1 in 50 was absolutely negative. One case with a dilution of 1 in 10 gave a complete positive reaction and one of 1 in 20 was absolutely negative.
31–36	9	—	9	One case with a dilution of 1 in 10 gave loose clumps with little loss of motility; one of 1 in 20 gave a like result; with one of 1 in 50 there were a few loose clumps and no loss of motility.
37–42	4	1	3	—
43–48	3	—	3	—

standard positive Widal reaction at the time of attack—i.e., absolute clumping and loss of motility in 30 minutes with a dilution of 1 in 50. None of the patients had suffered from any acute fever in the interim. In the cases which are quoted in the accompanying table as giving an indication of reaction a reaction more or less marked took place with the low dilution, but this became weaker with 1 in 20 and was absent with 1 in 50.

Two of the cases were doubtfully positive 1. The patient was a male, aged 44 years. The test was made 22 months after the attack. No illness had occurred in the interim. During the attack the serum gave a positive reaction with a dilution of 1 in 100. A dilution of 1 in 10 gave tight clumps with absolute loss of motility in 10 minutes; one of 1 in 20 gave tight clumps with incomplete loss of motility in 30 minutes; and one of 1 in 50 gave a few loose clumps with slight loss of motility in 30 minutes. 2 The patient was a male, aged 25 years. The test was made 23 months after the attack. Dilutions of 1 in 10 and 1 in 20 respectively gave tight clumps with absolute loss of motility in 25 minutes; with a dilution of 1 in 50 the clumps contained motile bacilli. The loss of motility was incomplete.

Three of the cases gave a positive reaction. 1. The patient was a male, aged five years. The test was made two months after the attack. With a dilution of 1 in 50 there were instantaneous clumping and loss of motility. 2. The patient was a male, aged 33 years. The test was carried out 12 months after the attack. A dilution of 1 in 50 gave instantaneous clumping and loss of motility. 3. The patient was a male, aged eight years. The test was made 38 months after the attack. The reaction was complete with dilutions of 1 in 20 and 1 in 50 respectively. The patient in No. 2 was operated on for gall-stones five months after his attack of typhoid fever; at the operation pus and some small gall-stones were found. The pus gave cultures of the colon bacillus, but serum gave a positive reaction with the bacillus typhosus. This case is of interest, being analogous to cases quoted by J. B. Miller,[7] when in an operation seven years after the attack typhoid bacilli were found in the gall-bladder and serum gave a positive reaction, and by Elsberg,[8] when in cases of osteomyelitis following typhoid fever five months and 16 months respectively after an attack serum gave a positive reaction. In No. 3 nothing could be found to explain the persistence of so strong a reaction after a lapse of more than three years.

Conclusions.—From the accompanying table of 68 cases it is seen that only three cases gave a positive reaction, one of which was only two months after the attack. This is a much smaller proportion of positive reactions than is given by Renard (35 out of 104), Fison (18 out of 21), Elsberg (eight out of 36), and Widal (11 out of 40). The difference is due partly to the inclusion by them of cases in which only a few weeks had elapsed since the original attack and partly to the low dilutions used by them—e g., Renard 1 in 10 and Fison 1 in 2 and 1 in 9. If we had considered a positive reaction with 1 in 10 sufficient our list would have shown eight more positive reactions, bringing our proportion up to 11 out of 68. While, however, we have no doubt that the reaction with the low dilution shows that the blood in some cases retains for a long time the specific agglutinating action on the bacillus typhosus, yet we wish to insist that this need lead to no error of diagnosis provided that sufficiently high dilutions—i.e., 1 in 20 or 1 in 50—are proceeded with in cases in which there is any doubt.

Elsberg states that he found no relation between the severity of the attack and the duration of the reaction. Our observations are in accordance with this. Many of our negative results were obtained from cases which had had severe attacks, often with relapses, while the patient in whom the only positive result, which cannot be explained on other grounds, had been obtained suffered from a mild attack [illegible] ...se falls in line with [illegible] and supports the [illegible] ...tion is due to the continued pr[illegible] ...phosus in the gall-bladder and elsewhere long after the original attack of fever. But the case described by Dr. Jonas and Dr. Seligmann,[9] [illegible] abscesses two years after [illegible] a partial reaction with [illegible] of this theory. (See also the case of [illegible] quoted by Dr. Jonas and Dr. Seligmann.)

St. Thomas's Hospital, S.E.

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[7] Johns Hopkins Bulletin, vol. ix., No. 86.

[8] New York Medical Record, vol. ii., p. 510.

[9] THE LANCET, Oct. 4th, 1902, p. 931.

DONATIONS AND BEQUESTS.—The Belfast Society for the Relief of Destitute Sick, the Belfast Nurses' Home and Training School, the Belfast Society for Providing Nurses for the Sick Poor, and the Greencastle District Nursing Association receive £1000 each under the will of the late Mr. James Gray of Antrim.—Miss M. A. Kirby of Bristol has bequeathed £2000 to the Bristol Royal Infirmary and a like sum to the Bristol General Hospital.

ON THE USE OF THE ROENTGEN RAYS IN THE DIAGNOSIS OF PULMONARY DISEASE.[1]

BY J. F. HALLS DALLY, M.A., M.B., B.C. CANTAB., M.R.C.S. ENG., L R.C.P. LOND.,
ASSISTANT RESIDENT MEDICAL OFFICER, ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, VENTNOR.

IN addition to the established methods of medical investigation of diseases of the chest comprised under the headings of inspection, palpation, percussion, auscultation, and mensuration we now have at our disposal the Roentgen rays, a newer yet not less potent factor in diagnosis. These rays, accidentally discovered by Professor Wilhelm Konrad Roentgen of Würzburg towards the close of the year 1895, although their nature and scope are as yet imperfectly understood, play nevertheless a most important part in diagnosis, prognosis, and treatment. For some time past the surgeon has found them of special value when he is called upon to reply to the many difficult questions which arise in the practice of his profession concerning injuries and diseases of the osseous system. It is only quite recently, however, that their uses to the physician have been clearly recognised and at the present time we seem to be standing on the threshold of discoveries which will prove to be of wide and far-reaching importance in the daily detection of deep-seated and obscure affections.

In a new science a new terminology is desirable in order that conceptions of new facts may find their adequate expression, and in the course of this paper a few terms will be found for the first time, amongst them being the adjective "transradiant" and its corresponding noun "transradiancy," which have been used in order to express more clearly the idea of permeability of the chest to the Roentgen rays than does either of the terms, "translucency" or "transparency," hitherto in vogue. Although, according to the recent researches of M. Blondlot,[2] the Roentgen rays appear susceptible of polarisation and may eventually be found to conform to the laws of light, yet the use of the term "translucent" implies an assertion which has not at present been proved. No such objection can be brought against "transradiant." Under their proper headings hereafter the "cardio-phrenic space" and "pleuro-pericardial lines" will be referred to.

My object is not to dissociate the Roentgen rays from the other modes of physical clinical research—although at times, as I shall show later, an accurate diagnosis may be based on the evidence which the rays afford, taken by itself alone—but to bring them into line with the older methods, an outline comparison with which will be found in the accompanying tables :—

METHOD.

$$\left.\begin{array}{l}\text{Radioscopy} \;\ldots\;\ldots\;\ldots\;\ldots\\ \text{Radiography} \;\ldots\;\ldots\;\ldots\;\ldots\\ \text{Stereoscopic}\left\{\begin{array}{l}\text{Radioscopy}\\ \text{Radiography}\end{array}\right.\\ \text{Localisation} \;\ldots\;\ldots\;\ldots\;\ldots\end{array}\right\} = \left\{\begin{array}{l}\text{Inspection.}\\ \text{Palpation.}\\ \text{Percussion.}\\ \text{Auscultation.}\\ \text{Mensuration.}\end{array}\right.$$

RESULT.

Roentgen rays.		*Percussion.*
Brightness	=	Hyper-resonance.
Transradiancy	=	Normal resonance.
Faint shadow	=	Impaired resonance.
Dense shadow	=	Dulness.
Opacity	=	Absolute dulness (tanquam femoris).

Thus it is clear that the so-called physical signs are really the results obtained by the use of a physical method.

Much of the practical work in connexion with this subject was done during my clinical assistantship at the City of London Hospital for Diseases of the Chest, Victoria Park, and I am greatly indebted to Dr. Hugh Walsham for his kindness in placing at my disposal so much excellent clinical material and apparatus and for the many helpful suggestions which he has made from time to time. To Dr. H. Lewis Jones also my thanks are due for the facilities granted to me for working in the electrical department at St. Bartholomew's Hospital.

RADIOGRAPHY AND RADIOSCOPY OF THE THORAX.

The apparatus which is essential comprises: (*a*) a means of generating the electrical current—usually an induction coil or static machine; (*b*) a vacuum tube and holder; (*c*) a sensitised photographic plate; and (*d*) a fluorescent screen.

Having first tested the apparatus to make sure that it is working properly the patient should then be brought in and placed in the required position—usually seated or recumbent; the plate is held securely against the thorax so that it cannot move and the current is started. The time of exposure is important and depends on many factors. With the tube at a distance of about two or three feet from the patient an exposure of from one to three minutes is usually sufficient. The penetration of the tube should not be too great, otherwise structures, which should appear dense, become transradiant. In like manner over-exposure of the photographic plate causes obliteration of shadows. The plate should always be placed with the film side next to the skin, because this insures sharper definition and also prevents some of the rays from being absorbed by the glass.

In order to know in a radiograph which is the right side and which is the left the relative position of the focus-tube to the patient and the film side of the plate must always be stated. We know that for any shadow to be cast at all the patient must be between the tube and the plate, and a comparison may be instituted between the skiagraphic effect thus obtained and that produced in the familiar "shadow show" by the interposition of objects which arrest the rays in their passage from a magic-lantern to the white screen. As Mr. J. Mackenzie Davidson[3] has well remarked, "These pictures consist of shadows projected by the rays from a fixed point; a skiagram must not be regarded as if it were a map." The proper interpretation of x-ray pictures can be brought about only by careful and repeated observations, but, thanks to stereoscopy, we can now bring to our aid the third dimension in space, so that a better estimate can be formed concerning the relative proportions of parts. The observations which follow were all made with the aid of an induction coil capable of giving a 14-inch spark at high pressure between the terminals of the secondary coil, which is composed of some 15 miles of wire wound in 70 sections. It is worked by two 4-cell accumulators, charged by continuous current from the main, of 21 ampère-hours' capacity and a total electromotive force of 16 volts. The tubes used were those made by C. H. F. Müller of Hamburg, of moderate "hardness" or penetrative power, the platinum anode being placed always exactly opposite the centre of the part to be photographed and the distance of the tube between one and two feet from the thoracic parietes.

The method of radioscoping the thorax is precisely the same as for radiography except that for the photographic plate we substitute the fluorescent screen and bring the tube nearer to the chest. The tube must not be placed in too close proximity, otherwise, owing to divergence of the rays, just as in the shadow show referred to above, the shadow of structures near to the tube will appear larger and more indefinite than that of structures more remote.[4] Examination with the tube posteriorly as well as anteriorly will help in great measure to correct erroneous impressions based on an examination from one aspect alone. Another equally important point, which cannot be insisted on too frequently, is that the anode should directly face the centre of the part to be observed with its surface parallel to the greatest transverse diameter of the chest.

RELATIVE USEFULNESS OF THE FLUORESCENT SCREEN AND THE RADIOGRAPH.

For some time past the question has been discussed as to the superiority or otherwise of radioscopy to radiography. The truth of the matter seems to be that both methods are indispensable and that the choice of one or the other is to be regulated according to circumstances. Where, as in hospital, one has to examine a number of patients it is manifest that in each individual case radiography is out of the question, for in a large proportion of these a diagnosis may be furnished at once on the results of radioscopy combined with auscultation and percussion. I think that in every case examined by means of the x rays a screen examination should be instituted, whether a photograph be subsequently taken or not, and that in a case presenting any difficulty, where it is of importance, from the point of view of after-treatment, to arrive at a correct diagnosis, one or more radiographs taken from different points of view should always supplement the fluoroscopic investigation. In private cases both methods should be used, for the action of the rays is cumulative and minute details which cannot be detected by the screen show clearly in the developed plate. Moreover, radiographs can be taken at successive dates and the progress of the disease thus noted. The fluoroscopic evidence is fleeting, although by making graphic records at the time of examination we may obtain some of the advantages of the radiographic method. In short, radioscopy records dynamic and radiography static conditions.

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[1] An abstract of a thesis. "The Roentgen Rays as a Means of Diagnosis in Intrathoracic Disease," for the degree of Bachelor of Medicine of the University of Cambridge.

[2] Comptes Rendus, Feb. 12th, 1903.

[3] Observations on Practical X-Ray Work, Archives of the Roentgen Ray, February, 1900.

[4] Archives of the Roentgen Ray, 1903.

THE NORMAL THORAX.

The radiograph of a normal thorax, whether examined from the front or the back, presents a well defined median opacity bounded laterally by parallel vertical margins on each side of which appears a transradiant area crossed by curved and arching shadows. This median vertical band of opacity corresponds with a resistance to permeability due to the vertebral column, the sternum, and the mediastinum with its contents; from the upper part of this band stretch two narrow shadows upwards and outwards—these correspond to the clavicles. Laterally the mediastinal shadow does not extend far beyond the limits of the sternal shadow. If the picture be taken with the tube placed posteriorly a shadow, somewhat triangular in outline, will be seen extending much more to the left than to the right of the thorax. This does not obscure the outline of the curved shadows referred to above, which represent the ribs, and corresponds to the heart and pericardium. By means of the fluoroscope a pulsation synchronous with each heart-beat may be observed

Alongside the mediastinal opacity and following the outline of the cardiac shadow are seen in many radiographs faint and ill-defined lines or streaks the nature of which is still uncertain (*vide* Fig. 1, *b*). It was originally thought that these lines represented the lower bronchi and bronchioles Later these streaks were attributed to mediastinal glands. Another opinion, first put forward by Dr. Walsham,[5] is that they are "due to the visceral pleura covering the inner surface of the lungs, as seen edgeways, and to the pericardium."

That these lines are not caused by the bronchi is, I think, clear for two reasons. It will be seen, in the first place, that the position of the lines does not correspond with the divisions of the bronchi. Even granting that these lines were so caused their position is such that they could be caused only by the lower ones No shadows are visible representing the bronchi, or the smaller tubes into which they divide, for the upper lobes, and it is difficult to see why these should not cast a shadow as well as the lower ones. Hence this suggestion appears untenable. In the second place, in all post-mortem radiographs of lungs which I have seen—a good example being reproduced in a paper by Dr. F. Gardiner[6] and another in Dr. Francis Williams's[7] book—the larger primary bronchi show, *not* as dark streaks or shadows, but as light areas, owing probably to their contained air, their density in the former specimen being equivalent to that of cavities present in the same lung and a little brighter than a patch of emphysema at the apex. It is improbable that the streaks are produced by mediastinal glands, for these are more mesial and produce, not lines, but patchy and irregular shadows.

With regard to the third view, I agree with Dr. Walsham[8] that a portion of the lines is due to the pericardium, but that the "visceral pleura" takes any share in their causation seems impossible from a consideration of the post-mortem skiagrams adduced in support of his opinion, for in the third and fourth radiographs taken with the lungs—and with them the visceral pleura—removed these lines still remain. That they are not due to the pericardium alone is clear, since in favourable cases they may be seen extending upwards as high as the sternal ends of the clavicles. To these streaks Dr. Walsham has applied the terms "cardiac lines" and "mediastinal lines" respectively, but since in all probability they belong to the junction of the parietal pleura with the pericardium and are manifestations of these, being radiographically continuous, I venture to suggest (under correction) the term "pleuro-pericardial lines" as being more expressive of what I take to be the origin of these shadows.

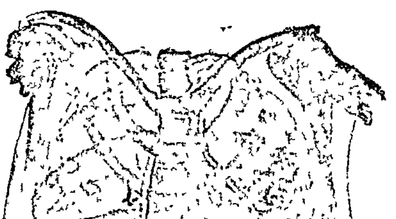
These streaks are not seen in every case, but when they occur recognition of them is important, for if their true nature be not realised they are very apt to be mistaken for evidences of disease, especially in a case in which "early" pulmonary tuberculosis is suspected

Other normal shadows are caused by the scapulæ. These can be largely eliminated by causing the patient to place both hands upon the top of the head and to rotate the elbows forward. This causes the scapulæ to turn edgewise and the upper part of the thorax is thus more clearly seen. Shadows cast by the scapulæ and clavicles can be recognised, if any doubt exist, by getting the patient to move the arms, when the shadows also are seen to move. Another somewhat triangular dense shadow presents itself in muscular subjects and is due to the large muscles of the shoulder girdle—*chiefly the trapezius and pectorales major and minor. This is* best seen when the patient is radiographed with outstretched arms, since this position causes the anterior axillary fold to become thicker. In females the mammary glands are sometimes represented by curved shadows.

On both sides of the median opacity a clear zone corresponds to each lung, which in health is transradiant from apex to base, thus allowing the posterior portions of the ribs, as well as the anterior, to be seen and producing a "lattice-work" effect Laterally the lungs are bounded by a darker line formed by the ribs where the shadows of these overlap In a few cases, especially in children, this line may appear as a dense black edge sharply limiting the inclosed area. The lungs brighten on deep inspiration, the varying degrees of transradiancy in the stages of expansion and contraction being probably for the most part due to the greater or less content of air at the time. Dr. Williams[9] attributes it, however, to the greater or less content of blood, for in comparing inflated with collapsed lungs removed from the body no such difference was noted by him. Inferiorly, the lungs are limited by a dark shadow with its convexity upwards, not dense enough to obscure the outlines of vertebral column or ribs. This rises and falls with the respiratory movements and corresponds to the diaphragm, below which shadows are cast by the liver and the spleen, a lighter interval appearing between these in some cases.

When the chest is examined with the tube anteriorly, to the left of the shadow cast by the vertebral column will be

FIG. 1 (*diagrammatic*).



Showing (*a*) "cardio-phrenic space" and (*b*) "pleuro pericardial lines" (tube posteriorly).

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[5] The Practitioner, July, 1901.

[6] X-Rays as a Diagnostic Agent in Phthisis Pulmonalis, Scottish Medical and Surgical Journal, November, 1902.

[7] The Roentgen Rays in Medicine and Surgery, 1902, Fig 99

[8] Archives of the Roentgen Ray, 1902

[9] The Roentgen Rays in Medicine and Surgery, 1902.

seen a semicircular pulsating shadow just above the base of the heart. This is termed the "left lateral bulge" and corresponds to the ascending part of the aortic arch. It is enlarged in aneurysm of that situation, or when displaced by the pressure of enlarged mediastinal glands. In a few cases a narrow triangular space is seen between the heart and the diaphragm, which lengthens and widens on deep inspiration but never extends so as to divide the shadows of the heart and the liver (see Fig. 1, *a*). Dr. Walsham formerly denied the existence of this space but now tells me that he has changed his opinion. I have repeatedly seen this appearance with the radioscope, but in the radiograph, owing to blurring due to movements of the heart and the diaphragm, it is more elusive. Since it is bounded by these organs above and below respectively I have given to this interval between the heart and the diaphragm the name of "cardio-phrenic space." I do not think that it has any pathological significance, for it is visible in many apparently healthy chests.

EXCURSION OF THE DIAPHRAGM.

The diaphragm is best observed with the focus-tube anteriorly, the screen being against the patient's back. The shadow in health presents two dome-shaped convexities, one on each side—that on the right being slightly higher than that on the left—and each half rises and falls after the fashion of a piston, symmetrically and rhythmically with expiration and inspiration. The text-books of physiology state that the diaphragm becomes flatter on inspiration: thus Sir Michael Foster[10]: "When at rest the diaphragm, drawn up by the negative intrathoracic pressure, presents a convex surface to the thorax; when contracted it becomes much flatter." So also Dr. E. H. Starling[11]: "When the muscular fibres of the diaphragm contract, two events occur, first, a lowering of the diaphragm; and second, a flattening of its circumference, which is thus drawn away from the chest wall." Other books on physiology follow suit. But, in point of fact, on radioscopic examination no flattening of the diaphragm is seen. The curve of the convexity on both sides is unaltered in descent, and each half—although attached to its fellow of the opposite side by the central tendon—by means of its own separate innervation through the phrenic acts quite independently. Taking the average of a large number of normal cases, I find that in quiet respiration the diaphragm moves half an inch on each side; but in maximum respiration the right side moves $2\frac{7}{8}$ inches and the left $2\frac{5}{8}$ inches, the right side having usually a wider excursion by about a quarter of an inch than the left.

UNILATERAL LIMITATION OF DIAPHRAGMATIC MOVEMENT IN PULMONARY TUBERCULOSIS.

After many and repeated observations I have found that loss of mobility of the diaphragm is the earliest indication of tuberculous mischief in the lung. Before any shadow due directly to the tuberculous process in the lung is visible the action of the diaphragm becomes evidently less on the unsound side. On looking up what few records there are on this interesting point, I find that Dr. Francis Williams[12] has published the following: "In many cases of pulmonary tuberculosis the range of movement of the diaphragm is shorter than in health; it does not descend as far as it should and this shortening of the excursion preceded in some cases the increase in density of the lungs and sometimes is one of the earliest signs of pulmonary disease." Dr. Bonnet-Léon[13] of Paris has not only reached the like conclusions but goes even much farther than I am prepared to admit. He states that, if diminution in the amplitude of the diaphragmatic excursions be observed, in the absence of any obvious cause one must always bear in mind the idea of commencing tuberculosis and must keep the patient under observation "in whom, some time later—90 times out of 100—will be found clear evidences of tuberculosis." To this impairment of diaphragmatic function Dr. Bonnet-Léon applies the term "diaphragmatic sign," and states that he meets with it at a time in the patient's life-history which he terms "the pre-tuberculous period." It seems to me that either a person has tuberculosis or he has not and that there is no intermediate stage such as this observer assumes. Hence I object to his term "pre-tuberculous" and would suggest that the tuberculous process has already begun; in other words, that the tubercle bacill are present and active although the process in the lung is not so advanced as to cast a definite shadow. I fail to see why in a healthy chest, even though its owner be "predisposed to tubercle" or of tuberculous descent, there should be unilateral diminished activity of the diaphragm. The cause of this early limitation of diaphragmatic movement has not yet been satisfactorily explained. One surmise is that it is due to unrecognised pleurisy which has left slight traces in the form of adhesions.

May not the cause be more reasonably assigned to a modification in some way of the inherent elasticity of the lung owing to the influence of the tubercle bacilli within it? Possibly some such process as the following takes place One apex does not expand as much as its fellow because its tissue vitality has suffered through toxic causes. Hence compensation is promoted in the lower lobe. But on account of the elasticity of the lung more muscular effort is required to obtain the additional expansion of the lower lobe which is necessary owing to lack of expansion in the upper. Hence it follows that want of descent of the diaphragm is mainly due to increased resistance to expansion on the part of the elastic tissue of the lower lobe on the affected side—that is to say, the deficient movement of the diaphragm is secondary to the lung condition. In out-patient practice one does not so frequently meet with pulmonary tuberculosis in this early stage, yet in a large proportion of cases which showed no resistance to permeability on screen examination, I have noticed deficient movement of the diaphragm on one side of the chest. In all these cases, of course, the ultimate test of tuberculosis is the finding of tubercle bacilli in the sputa. Unfortunately, this early stage cannot be illustrated by radiographs, for they would show nothing more than the appearances of any healthy chest, but the observations can be verified by anyone who takes a number of suspected cases without physical signs and examines them radioscopically.

LIMITATION OF DIAPHRAGMATIC MOVEMENT IN FIBRO-CASEOUS PULMONARY TUBERCULOSIS.

When the disease has progressed so that the characteristic stippled shadows are visible in the lung limitation of diaphragmatic mobility may become more pronounced or may decrease owing to compensatory hypertrophy of the muscle elements. It is a striking result that marked limitation may occur even when the apex only of the lung is attacked. This is probably due, as in the early cases, to toxic influences, but here there is in addition actual destruction of the lung tissue. In more advanced cases, moreover, where pain is a frequent symptom this cause, apart from other considerations, acts powerfully in inhibiting or lessening diaphragmatic movements. In the great majority of cases inflammation of the pleura coexists, as the pain may signify, and when the symptoms have become more chronic and adhesions have formed these also limit the action. MM. Kelsch and Boinon[14] examined radioscopically the chests of 124 young soldiers suffering from more or less simple ailments, not pulmonary. In 73 of these the examination proved negative; in 13 cases unilateral diminution of diaphragmatic excursion was apparent and in one bilateral diminution. In some cases the lungs were found to be in shadow, in others they were free. It is not possible to say that all the abnormal cases were tuberculous, for limitation may depend on other causes, but probably the greater number were so.

In the accompanying table are recorded the results of observations in 20 cases, and notes of Cases 2, 6, 8, and 10 will be found in the section on "Pulmonary Tuberculosis." Diminution in extent of excursion of the diaphragm will be noted in the great majority on the side most affected, the general rule being that in quiet and normal breathing the excursions are equal on the two sides, but on maximum respiration they are slightly greater in extent on the right than on the left side. The diminution referred to is well marked in Cases 3, 6, 13, and 18. Case 14 is interesting in that, although one of tuberculosis, the range of movement of the diaphragm is very much above the average. In Cases 6 and 12 the movement of the diaphragm was jerky and interrupted. In other cases undulatory movements have been noted. It is possible that these phenomena may be due to faulty innervation, the result of reflex irritation from the affected lung.

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[10] Text-book of Physiology, sixth edition, Part ii., 1895.

[11] Schäfer's Text-book of Physiology, vol. ii., 1900, p. 276.

[12] The Roentgen Rays in Medicine and Surgery, 1902.

[13] Sur l'Emploi des Rayons de Roentgen pour le Diagnostic Précoce de la Tuberculose Pulmonaire, Transactions of the British Congress on Tuberculosis, 1901.

[14] Béclère: Diagnostic de la Tuberculose, p. 41.

Table showing the Range of Mobility of the Diaphragm in 20 Cases of Pulmonary Tuberculosis.

No.	Sex.	Age.	Measurements in inches.				Remarks.
			Quiet respiration.		Maximum respiration.		
			Right	Left	Right	Left	
1	F.	24	⅝	½	2¾	2⅛	Early; left apex.
2	M.	35	¾	¾	1¾	1⅝	More advanced on the left side.
3	M.	27	1¼	1	2⅛	1⅛	More advanced on the left side.
4	M.	21	⅝	¾	2¾	2¼	Left fibroid; diaphragm one and a half inches higher on the affected side.
5	F.	24	⅝	¾	2⅝	3	More advanced on the right *side.*
6	M.	26	½	⅝	2	2⅝	More advanced on the right *side.*
7	F.	13	½	¾	2⅞	2⅝	Right side.
8	F.	33	½	½	2⅛	2½	More advanced on the right side.
9	F.	50	⅞	⅝	1¾	1½	Equal at both apices.
10	M.	30	⅝	¼	2¼	3	Early; more advanced on the right side.
11	M.	29	⅝	½	2¾	2½	Equal at both apices.
12	M.	44	½	¾	2¾	2¼	More advanced on the right side; diaphragm 2⅝ inches higher on the affected side.
13	M.	31	¾	1	1¼	1½	Late; more advanced on the right side.
14	M.	19	1¼	1⅝	3⅞	3⅝	Right apex.
15	M	32	⅞	⅝	1⅛	1¾	Left apex.
16	M.	31	⅜	½	1¾	1⅝	Both apices; more advanced on the right side.
17	M.	50	1	½	—	—	Both lungs; more advanced on the left side.
18	M.	33	½	¾	2½	2⅜	Both apices; more advanced on the right side.
19	F.	31	⅝	⅝	2¼	2¼	Right apex.
20	M.	25	⅜	½	1	1⅛	Both lungs, more advanced on the left side.

PULMONARY TUBERCULOSIS.

In the diagnosis of tuberculosis of the lung the Roentgen rays reach their widest and most practical everyday application. Aneurysms are comparatively rare; the insidious tubercle bacillus is with us always. Although observers may differ widely as to the interpretation of evidence based on tactile and auditory impressions, ocular evidence in most cases admits of no difference of opinion. Dr. Immelmann[15] of Berlin says: "We cannot rely upon percussion; its results are often in no proportion to the gravity of the disease. It may not give any indication in the very early stages of the malady, nor even of small cavities imbedded in the air-holding tissues of the lung. With auscultation it is not very different. No sound of respiration is characteristic of the phthisical process. We are in a position to give a definite diagnosis by clinical methods only when the tuberculous foci disintegrate and open into the bronchi and the possibility is offered of finding tubercle bacilli in the sputum."

Diagnosis to be of much service in pulmonary tuberculosis must be early. As Dr. Samuel Gee remarks,[16] "Therapeutics must begin before physical signs have developed, for if you wait for physical signs you wait too long." It is claimed that the Roentgen rays can detect tuberculosis of the lung at an earlier stage than any other means of physical diagnosis up to the present time at our disposal. In order to illustrate this I would take a typical patient in whom "early phthisis" is suspected and who comes up to the out-patient room with a slightly impaired note over one apex, over which area prolonged expiration is audible; nothing further can be ascertained except that the patient has a cough; he has not had hæmoptysis, he has not lost flesh, nor has he a family history of tubercle. This evidence, so far as it goes, is not sufficient to justify a diagnosis of pulmonary tuberculosis. This I say advisedly, because, although there is a difference of opinion on this point, some physicians being confident enough to give a definite diagnosis of tubercle on these signs alone, yet it should be remembered that at times a case of mitral stenosis presents many similar signs to those of phthisis at one apex, such as impaired note, prolonged and harsh expiration, and dry crepitations, resembling pleural crepitus (*most frequently* in the third left intercostal space), and yet no tubercle is found post mortem, the physical signs having been due to pulmonary embolism. The dry cracklings may be due to forcing of air out of the air vesicles in juxtaposition with the left auricle (Sansom, Walsham, Ormerod). If, however, the patient be examined then and there with the fluorescent screen a shadow of medium density will probably be seen obscuring the whole of the upper lobe of the lung on the side previously suspected. It is almost certain that pulmonary tuberculosis, which has gone far enough to cause physical signs, is never unilateral, and this point is brought out much more clearly [illegible] older methods. It is now [illegible] o-called "early phthisis" [illegible] erately advanced. In the [illegible][17] "A case presenting the ordinary first-stage symptoms of the out-patient room, if for our fathers an incipient case, is in our eyes an advanced case." If now we examine our typical case three months later we find that the shadow has gained in density, clouding over two-thirds of the lung on the side where the disease first became apparent, and over the upper half of the opposite side extends a similar but lighter mottled shadow. Still later evidences of [illegible] manifest and so [illegible] either by the radio [illegible] at stated intervals [illegible] check the course of the malady and early diagnosis being most important we have to ask: "At what stage does tuberculosis of the lung first give evidence of its presence to the fluorescent screen or radiograph?"

It may be taken as an axiom that tubercle bacilli cast no shadow on a photographic plate. Hence the earliest stage of invasion of the lung cannot be recognised except by impaired mobility of the diaphragm. The next pathological state is that of grey miliary tuberculosis and I have long tried to obtain a photograph to show acute miliary tuberculosis in the lung of a living subject but have not yet [illegible] too, was taken post mortem. Further investigation is yet required, but up to the present the evidence goes to show that tubercles in the lung cause no shadow until they have reached the "yellow" or caseating stage and then only in children or persons with very permeable chests. I have investigated the notes of one case, published in 1901 as "acute miliary tuberculosis in a child," radiographed during life, but found that there was no post-mortem evidence of tubercle in the lungs, the darker patches interspersed with lighter areas being due to broncho-pneumonia.

The typical shadow cast by "early" pulmonary tuberculosis is mottled or stippled. This appearance is characteristic and is simulated only by new growth, which latter is distinguished by the distribution of the shadows, peculiar physical signs, and the history. Other shadows, for which the tuberculous shadow may be mistaken, are those due [illegible] mammary [illegible] ese may be [illegible] regularity. [illegible] n the angle [illegible] not of their [illegible] moderate density and this is increased if the lung be congested, but the loss of permeability due to caseation throws a still [illegible] ented by cavities vary [illegible] whether empty or not. [illegible] er have been clearly seen during the [illegible] erified post mortem. A cavity at the apex or on the side nearest the focus-tube and close to the surface of the lung appears if empty as an area of unusual transradiancy. If full of pus or retained secretion, if imbedded in the centre of the lung or in a mass of consolidation, it may not appear, or it may be found lighter or darker than the surrounding tissue and, in such conditions, it is difficult to diagnose it with certainty. In many cases I find that cavities as seen by the x rays are smaller than the auscultatory signs indicate; in others the results obtained by each method separately closely correspond, this being usually, I think, when surrounding consolidation is small in amount. However damaged the base of the lung may become as a result of tuberculous infiltration, a clear triangular interval is always left between it and the diaphragm represented diagrammatically in Fig. 2 (*a*). This space corresponds to the lower part of the pleural cavity which the lung does not fill except on deep inspiration. Some observers state that the size of the heart is reduced and to this they attach some measure of diagnostic importance. As regards arhythmical tachycardia my observations are in accordance with those of Dr. Espina y Capo[19] of Madrid who says that this sign may be observed "in more than 94 per cent. of cases." In some moderately advanced cases shadows cast by enlarged bronchial glands are clearly visible and excellent radiographs illustrating this have been published. The shadows are irregularly disposed above the heart shadows, often causing apparent enlargement of the left lateral bulge. Calcareous glands appear as opaque nodules.

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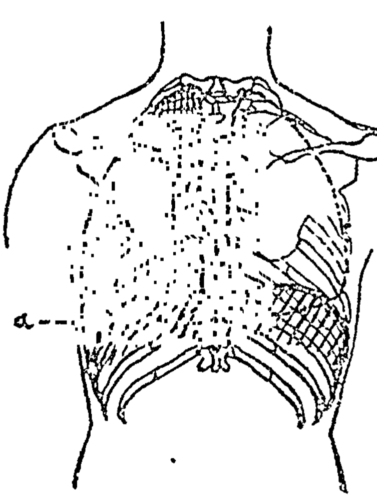
[15] Quoted in Archives of the Roentgen Ray, 1900, p. 76.

[16] Medical Lectures and Aphorisms, 1902, p. 240.

[17] Transactions of the British Congress on Tuberculosis, 1902.

[18] Recent Progress in Radiography, The Hospital, Oct. 5th, [illegible]

FIG. 2.



Showing clear space between lung and diaphragm.

The following four cases bring out various points in diagnosis, the numbers corresponding with those in the accompanying table.

CASE 2.—The patient was a man, aged 35 years, who had complained of cough for five months. There was no hæmoptysis but there were weakness and rapid loss of weight. A physical examination of the chest showed anteriorly deficient movement on the left side. The note was slightly impaired over both apices. Harsh irregular breathing and dry clicking crepitations were heard over the right side as far down as the second rib and over the left side as far down as the third rib. Posteriorly, the note was dull over both apices, over which harsh breathing was audible. There were dry crepitations at the end of inspiration over the right interscapular space. A radioscopic examination with the tube posteriorly showed in the right apex a dense shadow to the third rib and on the left apex a lighter shadow to the third rib. With the tube anteriorly it showed on the right apex a shadow down to the fourth rib and on the left apex an opacity at the apex shading off gradually to the fourth rib. There was "roof-tile" appearance of the ribs on both sides. The diaphragmatic movement was with quiet respiration three-quarters of an inch on both sides, while with maximum respiration it was one and three-quarter inches *on the right side and one and five-eighth* inches on the left side. In this case the signs to percussion, auscultation, and radioscopy correspond very closely.

CASE 6.—The patient was a man, aged 26 years, who had had hæmoptysis two years before. There was no cough, expectoration, or night sweats, but there was loss of appetite and of weight. Physical examination of the chest showed anteriorly an impaired note over the right apex and posteriorly dulness over the right side as far as the fourth rib. There was clear vesicular breathing all over the chest, with no added sounds. A radioscopic examination with the tube anteriorly showed the right side in shadow down to the fifth rib and the left side in shadow down to the third rib. With the tube posteriorly it showed the right side in shadow down to the third rib and the left side in shadow down to the second interspace. The diaphragmatic movement was with quiet respiration half an inch on the right and five-eighths of an inch on the left side, while with a maximum respiration it was two inches on the right side and two and five-eighths inches on the left side. In this case physical signs gave no indication that the disease was other than unilateral; radioscopy shows it to be markedly bilateral and more extensive on the right side.

CASE 8.—The patient was a woman, aged 33 years, who had complained of cough during the previous seven months with profuse expectoration. She had slight hæmoptysis on the day when she came to hospital. Her appetite was fair and there were no night sweats or wasting. A physical examination of the chest showed anteriorly dulness and bronchial breathing in the right front below the clavicle as far as the third rib. A radioscopic examination with the tube anteriorly showed on the right side a shadow as far as the fifth rib and on the left side a shadow as far as the third rib. With the tube posteriorly it showed a shadow at each apex as far as the clavicles and the first rib. The diaphragmatic movement was with quiet respiration half an inch on both sides, while with maximum respiration it was two and one-eighth inches on the right side and two and a half inches on the left side. In this case although physical signs only pointed to unilateral involvement yet on screen examination both sides were seen to be in shadows.

CASE 10.—The patient was a man, aged 30 years. He had no cough, but his expectoration was thick and there were night sweats and wasting but never any hæmoptysis. A physical examination of the chest showed, posteriorly, a prolonged expiration in the right scapular region. No other signs were discovered. Radioscopic examination with the tube anteriorly showed on the right apex a dense shadow to the fourth rib and on the left apex a light shadow to the fourth rib. The diaphragmatic movement was with quiet respiration five-eighths of an inch on the right side and three-quarters of an inch on the left side, while with maximum respiration it was two and three-quarter inches on the right side and three inches on the left side. This is another of these "early" cases which speaks for itself and shows how extremely valuable the Roentgen rays are. The chief points which established the diagnosis were the shadows and limited diaphragmatic mobility. Without the aid of the Roentgen rays this diagnosis could not have been made.

PLEURISY.

Acute pleurisy coming on for the first time, when in the dry stage, apparently casts no shadow. In pleuritic effusion appearances vary according to the nature and amount of the fluid contained in the pleural cavity at the time of examination. A purulent effusion yields a darker shadow than a sero-fibrinous effusion, the shadow in each case being homogeneous and of uniform density all over. Other conditions being equal, the heart is displaced to a greater extent when the effusion is left-sided, and in some cases it lies more transversely than normal.

EMPHYSEMA, BRONCHITIS, AND ASTHMA.

These three conditions are so frequently associated that I have grouped them under one heading.

Emphysema is indicated by brightness of the lungs as a whole; or, if only parts of the lungs be affected, by brightness of those parts. This brightness is intermediate between the normal clearness of the lung and the exceptional brilliancy seen in pneumothorax. Radioscopically, the typical "barrel-shaped" chest is seen, the ribs being raised into the horizontal position of forced inspiration. Whether this brightness be the result of more air or less blood in the lung must remain an open question. The vertical position of the heart should be noted; it is attributed to lowering of the diaphragm and increased lateral pressure on the part of the lungs. A skiagram taken laterally shows the apex of the heart to be no longer in contact with the chest wall, but expanded lung intervenes. This distance is probably as important a factor in causing

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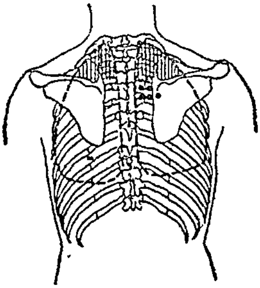
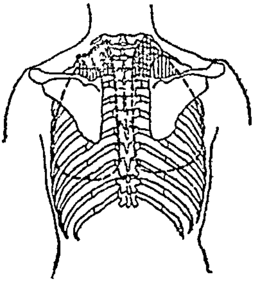
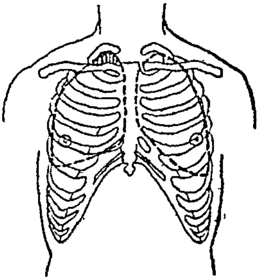
[19] Importance of X Rays in Early Diagnosis of Tuberculosis, Transactions of the British Congress on Tuberculosis, 1902.

PHYSICAL EXAMINATION. RADIOSCOPIC EXAMINATION.

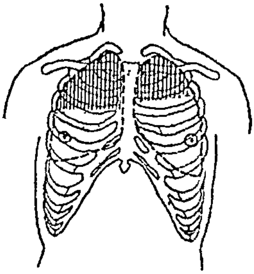


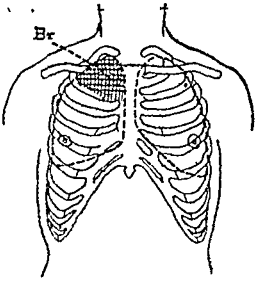
CASE 2



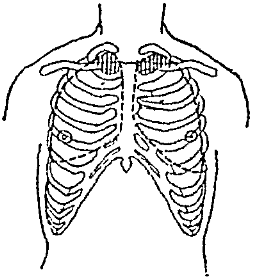


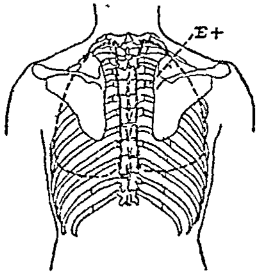
CASE 6.



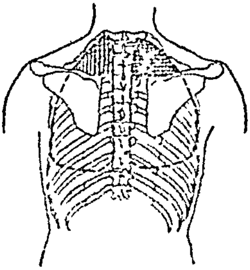


CASE 8.





CASE 10



||| indicates impaired note.
# indicates dull note
∷ indicates dry crepitations
Br indicates bronchial breathing
E+ indicates prolonged expiration

||| indicates faint shadow
# indicates dense shadow
▯ indicates opacity

the heart sounds to be absent or muffled as is the interposed lung. A radiograph of a case of bronchitis would do equally well to illustrate the appearances presented by a normal thorax, hence this condition *per se* cannot be diagnosed by the x rays. The appearances presented in long-standing cases of asthma are similar to those of emphysema. In true emphysema and bronchitis the excursion of the diaphragm is limited in the upper part of its course; consequently the dome does not rise to the height which it reaches in health. In some cases of asthma, too, the action of the diaphragm on the affected side has been seen during the paroxysm to be inhibited. After the fit of coughing the affected half of the diaphragm ceases to be immobile and resumes its function. In compensatory emphysema of one lung, however, due to impaired function of the opposite organ, the range of movement is increased in both upper and lower halves.

PNEUMONIA.

In the early stages of pneumonia due to engorgement and exudation a light shadow is cast Consolidation is manifested as a dense shadow with ill-defined edges, or as opacity. In doubtful cases, especially where pneumonia be suspected, although there are no physical signs in the lungs the Roentgen rays are often of much service. By their aid the existence of a central patch of pneumonia may be revealed. In most cases they are the only means whereby a central pneumonia can be detected at all. The ribs on the unaffected side in a case of unilateral pneumonia are more horizontal than normal and the lung tissue bright, owing to hyperactivity of the sound lung which is practically doing the whole work of respiration. The shadow on the affected side is opaque, but the margin is not strictly limited, as in pleural effusion, but fades gradually away. Movement of the diaphragm in the downward half of its excursion is limited. When in any given case unilateral limitation of the diaphragm is observed we ought always to think of pulmonary tuberculosis, pleurisy, and pneumonia, for to one of these three causes the limitation is most often due. Restoration of diaphragmatic function is found by experience to be a more accurate test of the progress of the disease towards recovery than alteration of the physical signs or diminution of the opacity in the lung.

GANGRENE OF THE LUNG.

Pulmonary gangrene can be diagnosed from fœtid bronchitis by the x rays. Well-defined opacity reveals the existence of the former condition, an indication being thus given to the surgeon as to the site and extent of the gangrenous process which may be cured after costal resection and pneumotomy.

SUMMARY.

In bringing this subject to a conclusion I may say that I have endeavoured to present facts which have come under my own observation, as well as those noted by others, without any undue bias towards one or other method of physical examination. Many more illustrative cases might have been adduced and there are many interesting points upon which, for lack of space, I am unable to touch. It would appear at first sight as if the Roentgen rays presented a royal road to the art of diagnosis and that it is now no longer necessary to undergo much clinical labour in order to acquire manipulative and auscultatory skill: but this view is superficial and the value of the older methods is enhanced by the presentation to the eye of intrathoracic morbid appearances. Hence in many cases one method without the other is incomplete.

It is not claimed that the Roentgen rays are infallible, and, in fact, the like holds good of the older methods. In either case the greater the experience of the physician the more accurate should be his results In thoracic diseases especially even the most skilled are at times at a loss, and with the radiograph, as with the ophthalmoscope, not until one becomes accustomed to normal variations can a true judgment be formed of those in disease. Moreover, the lack of visual purple in the eyes of some renders them unable to see anything like as much in a skiagram as others can under equal conditions. A good radiograph in some respects may be said to resemble a painting by Turner. Without intuition or previous study the one is almost as incomprehensible as the other, but as we gaze the wealth of detail rises before our vision until finally we are able to interpret the meaning of streaks and shadows that to the untrained eye are meaningless.

CONCLUSIONS.

1. That the Roentgen rays form an important adjunct to the methods of physical investigation previously in use
2 That unilateral limitation of diaphragmatic movement, as seen by means of the fluoroscope, is often the earliest indication of commencing pulmonary tuberculosis.
3 That by the aid of the Roentgen rays pulmonary tuberculosis can be diagnosed at an earlier stage than by any other means at our disposal.

"Plusieurs fois, la radioscopie a révélé ce que les autres moyens de l'exploration physique avaient laisé inaperçu, ce que même ils ne révélaient pas après un nouvel examen" (Bouchard).

Ventnor.

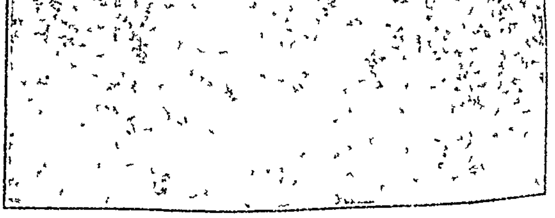
A BRIEF NOTE ON A BACILLUS IN A CASE OF ULCERATIVE COLITIS.

BY THEODORE FISHER, M.D., M R C P. LOND,
PATHOLOGIST TO THE BRISTOL ROYAL INFIRMARY; PHYSICIAN TO OUT PATIENTS TO THE BRISTOL HOSPITAL FOR SICK CHILDREN

BRIEF and imperfect though the following notes are, the bacillus to which they refer seems to me to have possessed features of sufficient interest to make it worthy of a short notice.

Cultures were taken from the liver of a man, aged 66 years, who had died from ulcerative colitis, where the ulceration of the large intestine was very extensive. Almost the whole of the mucous membrane from the ileo-cæcal valve nearly to the anus had disappeared, only little islets of swollen mucous membrane being here and there present which studded the exposed muscular coat like small polypi The cultures from the liver were taken on agar, gelatin, and glucose agar. At the end of 24 hours there was little growth in any of the media and for some reason they were not looked at again for another seven days. There were then marked gas formation in the glucose agar, a moderate amount of growth of apparently typical bacillus coli character on the gelatin, and a more scanty growth of similar character, but perhaps a trifle more translucent, on the agar. The agar culture was first microscopically examined To my surprise a growth similar to that of anthrax was seen The preparation showed felt-like masses composed of interlacing chains of bacilli. The segments in the chains varied considerably in length and also in breadth. No trace of branching could anywhere be seen. The growth decolourised when stained by Gram's method. The growth on the gelatin was composed chiefly of medium sized bacilli with rounded ends like the bacillus coli. Many of the bacilli had a barred appearance owing to irregular staining. Mixed with them were a few chains of bacilli which appeared to be the same bacillus as that which had grown on the agar. There were

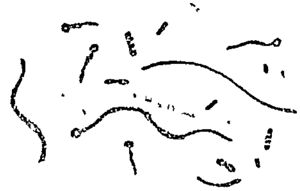
FIG. 1.



Culture from the liver on agar (eight days' growth), showing interlacing chains of bacilli.

o a few cocci present. The growth in the glucose agar s similar to that on the gelatin. Plate cultures were [illegible] on gelatin and the bacilli separated [illegible] h were a form of staphylococcus. [illegible] 1, however, on the original gelatin ture proved to be the same as the short bacillus sent in the plate cultures, since all sizes existed from ments long enough to stretch nearly across the field to rt, almost coccus-like bacilli. Although in cultures of out 48 hours' growth the filaments presented an unbroken e, in cultures four or five days' old they showed irregular [illegible] to the long threads [illegible] agar and gelatin [illegible] unfortunately the [illegible] There seemed to be no doubt, however, that the growth on gelatin, and presumably therefore the growth on agar also, was the bacillus coli. Lactose and saccharose as well as glucose were fermented. In passing it may be mentioned that the growth on saccharose agar showed bacilli of varied shape These were short round-ended bacilli, diplo-bacilli, and barred bacilli, and in addition to those numerous filaments, many of which had an enlarged spherical extremity at one end and a [illegible] In broth there was cloudiness [illegible] Numerous long form [illegible] th had the typical growth [illegible] of the bacillus coli. The [illegible] few in number. [illegible] coagulated It was interesting to note the persistence of the long forms After being grown successively on four different media during the space of two months the filaments were still present. It may be added that a similar growth was obtained from the spleen.

FIG 2.



Curious forms in culture on saccharose agar (48 hours' growth)

FIG. 3.

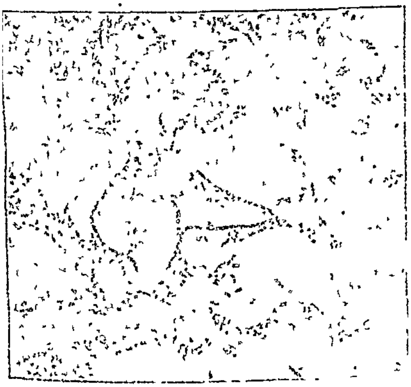


Plate culture on gelatin (48 hours' growth), showing filaments and bacilli of various lengths.

Although all the tests for the bacillus coli were not tried there can be little doubt that this bacillus was a variety of that micro-organism. Pathologists seem fairly well agreed as to the cause of acute dysentery, but the bacilli found in association with chronic ulcerative affections of the large intestine appear to have varied considerably in their nature. Varieties of the bacillus coli seem to have been the most common micro-organism found, and allowing that this bacillus is one of those varieties it has seemed to me that the curious felt-like character of the primary growth on agar is worthy of brief record. I have to thank Mr. George Brebner, lecturer on botany at University College, Bristol, for kindly taking the micro-photographs for me.

Clifton, Bristol.

THREE CASES OF CHOLECYSTECTOMY.

BY FREDERIC S. EVE, F.R.C.S. ENG.,

SURGEON TO THE LONDON HOSPITAL, ETC.

CASE 1.—The patient was a female, aged 25 years, who was sent to me at the London Hospital by Dr J Dunlop of Aveley on April 24th, 1898 On the previous day she was attacked with retching and sharp pain in the right side of the abdomen and noticed a swelling there. On admission the abdomen was somewhat distended. There was tenderness in the right hypochondrium and on palpation a rounded swelling, moving with respiration, was observed in the region of the gall-bladder. A diagnosis of local peritonitis due to empyema of the gall-bladder was made. Operation was performed as follows The abdomen was opened by an incision over the gall-bladder This was attached by recent adhesions to the omentum and transverse colon, both of which were deeply injected. The gall-bladder was distended and contained purulent fluid. No gall-stones were found in the gall-bladder or cystic duct, but on account of the patient's serious condition a prolonged examination was not made The gall bladder was drained. The patient was discharged at the end of a month, having still a small fistula. On Nov. 3rd, 1898, she was readmitted on account of the fistula remaining open. On the 14th I again opened the abdomen, separated the gall-bladder from numerous adhesions, and found a large stone in the cystic duct which it was impossible to move or to break up. The gall-bladder was therefore removed with the calculus and the wound was closed. Primary union ensued. The patient left the hospital on Dec 10th and continues in good health.

CASE 2.—A woman, aged 35 years, was transferred to my care by my colleague, Dr. Bertrand Dawson, in July, 1901. Her history was as follows Since Christmas, 1900, she had suffered with attacks of biliary colic. Four attacks occurred during the six weeks preceding admission. In April jaundice followed an attack of pain The patient was extremely stout, but on examination under chloroform Dr. Dawson could distinguish an ill-defined swelling suggestive of gall-bladder in the right hypochondrium. Operation was performed on July 5th. The abdomen was opened by an incision along the right linea semilunaris The edge of the liver extended about three inches below the costal margin, being drawn down by a greatly distended gall-bladder which was aspirated and then incised at the lower part of the fundus Several gall stones were impacted in the cystic duct and all efforts to dislodge or to crush them were unsuccessful Cholecystectomy was performed in the manner described below and a sleeve of peritoneum was then stitched over the end of the duct The abdominal wound was closed in the usual way. The progress of the case was uneventful Cultures showed that the fluid in the gall-bladder was sterile. She is at present quite well.

CASE 3.—A woman, aged 59 years, was transferred to my care by my colleague, Dr F. Warner. Her history was as follows. For three years she had suffered at intervals with attacks of colic, some of which were followed by jaundice During the last two months the attacks had been more frequent and the patient had hardly ever been free from pain. While in the medical wards she had one attack of pain and on one occasion her temperature rose to 100° F There was no jaundice. The liver was a little enlarged and the gall-bladder was not palpable Some rigidity of the upper part of the right rectus and local tenderness were present Operation was performed on Nov. 1st, 1901. [illegible] incision was made through the margin of the right rect[illegible] The gall bladder was shrunken [illegible] omentum, and attached to the transverse colon. In separating the adhesions the gall-bladder, which anteriorly was soft and rotten, gave way at its junction with the liver. On opening the gall-bladder it was found that the fundus and posterior surfaces were greatly thickened by fibrous tissue, being in places half an inch thick. It contained thin pus but no stones. The mucous membrane was thick, ulcerated, and covered with calculous material. The gall-bladder was removed. The abdominal wound was sutured and a drainage-tube was left in which was removed on the third day. Primary union took place; the subsequent progress of the case was uneventful.

Remarks.—The simplest manner of performing the operation of cholecystectomy is to incise the peritoneum covering the fundus of the gall-bladder at its junction with the liver. A finger can then be inserted between the gall-bladder and liver in the direction of the axis of the former. The separation is readily effected, practically without hæmorrhage. The reflection of peritoneum from each side of the gall-bladder on to the liver is then divided with scissors. This leaves the gall-bladder free. A cuff of peritoneum to cover the stump is preserved by incising this structure transversely on the under surface of the gall-bladder near the junction of the duct, stripping it upwards towards the hilum from the surface of the duct, which is then easily separated with the finger as high as may be necessary. A ligature is applied, the duct is severed, and the mucous surface of the stump is touched with pure carbolic acid. The cuff of peritoneum is sewn over the stump, but if time presses this may be dispensed with.

The indications for removal of the gall-bladder are already fairly well defined and need not be recapitulated. In the future I think it will be more often performed instead of drainage in cases in which the gall-bladder is thickened and contracted. It is quite evident that the gall-bladder is a structure which can be dispensed with without inconvenience, the chief difficulty being for the surgeon to assure himself that there are no stones in the common duct.

The indications for cholecystectomy are less evident when gall-stones are so firmly impacted in the cystic duct that they cannot be dislodged. The stones may be removed by incision and suture of the duct (Mayo Robson). The duct may, however, be ulcerated where the stone lay or there may be a cicatricial contraction above it, both being conditions likely to give rise to future trouble. Further, the operation of suture of the duct and subsequently of the wound in the gall-bladder to the parietes is likely to be more prolonged and I think more difficult than cholecystectomy.

Harley-street, W.

THE PREVALENCE OF PNEUMONIAS IN INFANCY.

BY S. VERE PEARSON, M.B CANTAB., M.R.C.P. LOND.,
ASSISTANT PHYSICIAN TO THE EAST LONDON HOSPITAL FOR CHILDREN, SHADWELL; MEDICAL REGISTRAR TO ST. GEORGE'S HOSPITAL.

MOST authorities on the diseases of infancy are now agreed that croupous pneumonia is by no means uncommon amongst infants. The knowledge of this fact, at one time the exclusive property of those who worked at hospitals for children, is even now not so generally recognised as it should be. The importance of realising it is evident at once when the prognosis of this variety of pneumonia is compared with that of broncho-pneumonia; for croupous pneumonia in infants has a good prognosis, while the prognosis of broncho-pneumonia is bad. It is essential, therefore, not only to differentiate the one variety from the other but also to have a correct idea with respect to their absolute and relative frequency. I am anxious to bring forward some data showing that croupous pneumonia is more common during the age of infancy than at any other succeeding age, an opinion somewhat at variance with that at present generally accepted. For, while authorities agree that croupous pneumonia occurs not infrequently at this time of life, they do not hold that it is more frequent then than at any other period of childhood. I shall attempt to show that during the first two years of life croupous pneumonia is not in order of frequency very far below broncho-pneumonia, which is admittedly much more prevalent during infancy than at any other succeeding period.

The prevalence of such a serious disease as br
pneumonia is well shown by the effect of its occurre
the general death-rate. The important part which i
in affecting the mortality of the community is indisp
30 per cent. of all deaths in England and Wales oc
infants under two years. And probably nearly 25 pe
of these are the subjects of broncho-pneumonia.
figure takes into account those deaths put down to n
and whooping-cough occurring under two years of a
the majority of these if not dying from broncho-pne
at all events die with it, and most of them die d
from it. Take, again, some returns from large hospi
children where infants are admitted without resti
Out of 726 consecutive necropsies in the New York
Asylum 322—i.e., 43 per cent.—were cases of pneu
At the Shadwell Hospital for Children, into which inf
diseases are not admitted, during 1901 out of 274 de
the medical side 54—i.e., 20 per cent.—died from pneu
During the last five years at the Shadwell Hospi
average death-rate of patients under two years
admitted for broncho-pneumonia was 64 per cent.,
higher than either of the two diseases next in the
of mortality—viz., epidemic diarrhœa and marasm
average death-rates from which were 63 per cen
46 per cent. There were during this period 261
treated in the hospital for broncho-pneumonia, 459 f
demic diarrhœa, and 177 for marasmus.
then, is pre-eminently a disease of infa
dispute and generally accepted.

The prevalence of croupous pneumonia cannot be
by its effect upon the death-rate, because its morta
a low one. *It is evident that there is still a* som
widespread impression that this variety of pne
is uncommon in infancy, for in looking through
medical literature one meets with, and meets with
frequently, the statement that it is a rare disease
age. I will give two quotations from several wh
have recently come across. M. Pfaunder[1] in an artic
lished in July, 1902, says: "This form of pneumonia is
infancy"; and Dr. Clive Riviere[2] in discussin
fibrinous pneumonia of childhood, states that "the
is certainly uncommon in the first two years of life
the other hand, it has been said[3]—and my exp
would lead me to uphold the truth of this
ment—that croupous pneumonia is more frequent
first two years than in any other succeeding
period of life. On consulting several text-books
point, however, I find that these do not agree wi
opinion. Dr. Emmett Holt[4] considers the third to th
year as the commonest age-period for croupous pneu
Dr. Morrill, in Keeting's Cyclopædia of Pediatrics
that the maximum age for liability to croupous pne
is between the ages of four and seven years. He
regarded the sixth to the twelfth year as the commone
period for croupous pneumonia in childhood. Dr.
Hawkins[6] has published a table worked out from a
number of cases showing that croupous pneumo
commonest between the ages of 20 and 30 years.
statistics of St. George's Hospital, which I have loo
for a small number of recent years, agree with th
view, when they are arranged in periods of ten
Now statistics are notoriously misleading and th
the point at present raised are very likely to
because it is hard to get over certain inherent
culties. These are those connected with the fo
of any conclusions upon hospital practice, where
hospital for children, on the one hand, adult patien
not admitted, or, on the other hand, where, at a g
hospital, the number of infants and children admit
limited. At a children's hospital, also, not only a
records incomplete on account of the non-admitta
adult patients, but they may be further vitiated by the
ence of a restriction, so often present, as to the relat
absolute number of infants taken into the wards. A
difficulty, which will be dealt with below, sometimes
in the case of infants—viz., the difficulty of mak
diagnosis between croupous and catarrhal pneumonia.
following statistics, therefore, based upon the records

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[1] Munch ... July, 1902.
[2] St. Bar ... r, 1902.
[3] Coutts ... ber, 1902.
... New Syd
[5] Lectures on C ... Society, 1889.
[6] Practitioner, vol i., 1893, p. 434.

ast London Hospital for Children, Shadwell, where, howver, there is practically no restriction on the number of fants admitted, must be taken for what they are worth. sually 40 per cent. of the admissions into the hospital are atients under two years old. Moreover, the diagnoses for e most part were made by physicians not only well versed , but recognised authorities upon, the medical diseases infants—namely, by the then three senior physicians, r. Eustace Smith, Dr. J. A. Coutts, and Dr. Dawson Villiams. Now at Shadwell during the three years 1899–01 311 patients were admitted into the hospital suffering om croupous pneumonia. Of these 121—i e., 40 per nt.—were under two years of age, 137 were between two nd six years (a large proportion of these were patients etween two and three years of age) and 53 were between x and 14 years. It is obvious from these figures that mongst children the commonest age-period for croupous [illegible] y.

[illegible] of croupous pneumonia relative to [illegible] the Shadwell statistics it would eem—and here again my experience leads me to agree with e broad facts revealed by those statistics—that croupous neumonia in infancy is relatively to broncho-pneumonia [illegible] ed In a series [illegible] t 25 per cent. of [illegible], two years were [illegible] ias. Now in the ree years during which 121 patients under two years of age ere admitted for croupous pneumonia into the Shadwell ospital 230 cases of broncho-pneumonia were admitted. f these 172—i.e., 75 per cent.—were under two years of ge, 56 were between two and six years of age, and there ere only two patients older than six years of age It must o borne in mind that these figures are from a hospital where ery few infectious diseases are treated; and that conequently the relative frequency of croupous pneumonia [illegible] s actually the case. The [illegible] pous pneumonia, although [illegible] nonia in infancy, does not [illegible] of its occurrence.

[illegible] nce of the two common arieties of pneumonia in infancy is intimately wrapped up ith the distinctions between the two forms. Sometimes he primary broncho-pneumonias are difficult to differentiate rom the croupous pneumonias of infancy. In a paper[7] hich I read not long ago before the St. George's Hospital Hunterian Society I defined some of the chief oints upon which dependence must be placed in making he differential diagnosis between croupous and catarrhal neumonia in infants. But I was unable there to enter nto the question as to the separate entity of each isease. In his book upon the "Diseases of the Organs f Respiration" Dr. Samuel West has brought forward rguments in favour of classifying all the primary bronchoneumonias of infancy with croupous pneumonia. He advoates the restriction of the term "broncho-pneumonia" to the econdary forms only and holds that many of the primary orms are clinically cases of croupous pneumonia which take n pathologically the broncho-pneumonic lesion because the neumococcal inflammation is in an infant in whose ulmonary system there are anatomical and physiological eculiarities not present in the adult. It would be entering nto the question of etiology too much at the present moment or me to discuss this matter fully, but I can see no *a priori* eason why the pneumococcus cannot set up a true bronchoneumonia as well as a true croupous pneumonia. If roupous pneumonia in infancy really takes on the bronchoneumonic type of lesion we are seeking for a distinction where there is no real difference and it would be futile to liscuss either the differential diagnosis or the relative prevalence of the two conditions. But I do not agree with Dr. West on this point. To fall in with his opinion is not only inexpedient and uncalled for in the present position of our knowledge as to the etiology of the pneumonias but also dangerous to the precision and accuracy of our outlook upon the clinical aspects of these conditions. There would be a liability to lose sight of the important practical point—namely, the great difference in the prognosis of the two complaints—if this view were generally adopted. It is true that the very high mortality of broncho-pneumonia in infants is less in the case of the primary form than in the secondary; but its mortality rate never reaches that low limit which is associated with the croupous pneumonia of childhood. In practice some cases of pneumonia, diagnosed as croupous, more especially, of course, in those babies who die, are really cases of primary broncho-pneumonia; for in the primary broncho-pneumonia sometimes the disease spreads so rapidly and signs of consolidation become evident so soon that it may simulate very closely acute croupous pneumonia, especially should the signs be limited chiefly to one lobe. The likelihood of mistaking a primary broncho-pneumonia for croupous pneumonia is further rendered possible by its occasionally having a quite sudden onset, by its being sometimes associated with fever of the continuous type, and by the fact that it is usually of pneumococcic origin. But the opposite error of mistaking a croupous pneumonia in an infant for a broncho-pneumonia is equally common, and probably outside hospitals for children it is the commoner mistake. Moreover, another difficulty arises sometimes from the occurrence of intermediate forms. In the majority of these, in all probability, both varieties of pneumonia are present in different parts of the same lung or in opposite lungs at the same time. Dr. Coutts[8] points out that small secondary broncho-pneumonic patches may surround a consolidation of a truly croupous nature, that this is especially liable to occur in infants under two years of age, and that it is one of the most important ways in which difficulties arise in discriminating between the two varieties. But he maintains that "where the symptoms are well marked and typical and this, fortunately, is the case in a greatly preponderating majority of both forms, there is no difficulty in distinguishing between them."

In spite of these occasional similarities between the two diseases and the occasional difficulties in their diagnosis, however, they should never be confounded, for they differ essentially in their natural history, origin, incidence, course, histology, and especially in their clinical manifestations and prognosis. Dr. Pye-Smith[9] points out that because these two forms of pneumonia are occasionally difficult to differentiate the one from the other that is no reason why the attempt to do so should not be made in every case, nor any excuse for ever grouping them together either clinically or pathologically. As well might carcinoma and alveolar sarcoma or rubeola and morbilli be classified under the same head because sometimes they are almost indistinguishable.

The peculiarities of the pulmonary system of a baby no doubt explain satisfactorily why broncho-pneumonia is so common in infancy, why cases arise in which great difficulty occurs in the matter of diagnosis, why intermediate and mixed forms are found, and why broncho-pneumonia may come on as a complication of croupous pneumonia. But it seems to me unnecessary to claim that these peculiarities result in the croupous form of pneumonia taking on the catarrhal type in this class of patient, for I believe that the two types are as essentially distinct in the infant as in the adult. I maintain, then, that true croupous pneumonia is common in infants, that the primary broncho-pneumonias are in the majority of cases perfectly distinct from this, and that even those primary cases which occasionally simulate croupous pneumonia closely should be recognised as distinct from that disease and should not be classified with it but should remain in their present position amongst the broncho-pneumonias.

Serjeant's Inn, E.C.

RESPIRATORY CRISES IN GRAVES'S DISEASE.

BY J. GORDON SHARP, M.D. EDIN.

GASTRIC crises occurring in the course of Graves's disease are recognised and described, but I cannot recall any description of respiratory crises, yet I have met with at least two cases of very rapid breathing in which the exciting cause was evidently some poison set free in the system. The respirations succeeded each other with rapidity—not less than 60 a minute—the conditions being not unlike that seen in atropine poisoning. A peculiarity of the symptom is the marvellous action which opium, in some shape or other, has in slowing the respirations and restoring the patient to the normal well-being. In describing the two cases I shall omit all unnecessary details and confine my remarks to the salient points.

CASE 1.—A woman, aged 29 years, the mother of four children, had noticed a lump in the neck for two years, but had not suffered much discomfort till the onset of the present illness when she began to complain of palpitation, cough, and "difficulty of breathing." On inquiry and examination she was found to suffer from vomiting, cough, and pain over the larynx. The pulse was 210; tremor, moist skin, goitre, with throbbing vessels and exophthalmos were present, but the most marked symptom was the very rapid breathing. There was also a tickling cough which was referred to as originating in the throat. There was little expectoration. Half a drachm of paregoric and two minims of tincture of aconite in two tablespoonfuls of water were administered every four hours. The effect was marvellous. In a few hours the respirations fell to normal and the heart and pulse rates came down from 210 to 120, the usual frequency. The woman made a rapid recovery.

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[7] Practitioner, April, 1903.

[8] Edinburgh Medical Journal, September, 1902.

[9] Cf. [illegible] Allbutt's System of Medicine, vol. v., p. 104

CASE 2.—A woman, aged 65 years, the mother of several children, had for years suffered from "spasms" at regular intervals. These attacks were referred to a stomach condition, but I have reason to believe that they were only crises in Graves's disease. She had no exophthalmos but she had an enlarged, throbbing thyroid gland and she had herself observed that the throbbing was always worst when the "spasms" were present. The other signs and symptoms of Graves's disease were observed—tremor, moist skin, palpitation, pulse 120 to 170, and laryngeal crises—but not till the present occasion had the patient suffered from a respiratory crisis. This was supposed to have originated in a "cold." Suddenly she complained of a so-called shortness of breath, although really the condition appeared to be as if some agent were stimulating the respiratory centre at the rate of from 60 to 66 times a minute. There was practically no cough and when the chest was examined nothing could be found to account for the respiratory trouble. The whole expectoration in the course of the night amounted to less than one tablespoonful of clear viscid mucus. At this time there were retching and some little vomiting of stomach mucus, but *vomiting was not a prominent symptom.* The patient was placed in a warm, moist atmosphere and the usual expectorant mixtures were tried for 48 hours and without benefit, as might be expected. The woman was becoming exhausted simply from the frequency of the breathing. At this period I gave her a one-grain opium pill, the time being midnight, and ordered another to be repeated in an hour. She slept for four or five hours and awoke practically well, and her respirations were reduced to 18 or 20. She bitterly complained that I had not administered the pills earlier.

In searching for an explanation of this increased activity of the respiratory centre I think I am justified in holding that in Graves's disease a poison is thrown into the system which under ordinary conditions is excreted by the ordinary channels and produces only the usual symptoms. Occasionally this poison is present in great amount and the ordinary channels are unable to deal with it sufficiently rapidly and the stomach is called in to aid and one gets then a gastric crisis. Less frequently the poison is present in great quantity or the excretory organs are unable to deal with it and the poison reaches the respiratory centre in great quantity and then one meets with respiratory crises. I know this view is open to objections, but it has the virtue of feasibility. Supposing it to be poison, then it belongs to the atropine, digitalis, or strychnine group as far as its action on the respiratory centre is concerned. Now, opium is *antagonistic to this group—that is to say, it has the opposite* effect on the respiratory centre—and hence its curative action in the condition which I have detailed.

Leeds.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

BRITISH HOSPITAL, BUENOS AYRES.

A CASE OF LIPOMA OF THE CÆCUM.

(Under the care of Dr. JOHN O'CONOR.)

A WOMAN aged 45 years, was admitted into the British Hospital, Buenos Ayres, on Feb. 5th, 1900, with the following history. In October, 1899, she first complained of indigestion with some pain in the right abdomen near the which her medical attendant prescribed liquid diet mixture of soda, bismuth, and magnesia. She gr flesh and the pain became more intensified, accompanied flatulence, nausea, and a heavy feeling in the after food. On Jan. 3rd, 1900, she vomited for the time; afterwards this became a matter of frequent rence, but blood was not at any time observed in the matter. She had great difficulty in getting her bowels to the stools always appeared to be normal in character. 28th she felt a lump for the first time in the region she had previously complained of pain. On a distinct hard moveable tumour of about the size Tangerine orange was felt one inch below and to the of the umbilicus; it was tympanitic on percussion and tender to the touch. As general examination rev other organic affection the diagnosis seemed to pyloric tumour.

On Feb. 6th chloroform was administered and a incision was made through the right rectus; on op peritoneum a coil of large intestine presented, which out to be the ascending colon with a very moveable The latter contained a large ovoid mass which occupy its whole lumen. Taking into consideration absence of a doughy feeling and the immobility of swelling inside the bowel, a two-inch incision was made the cæcum. A gangrenous mass presented, which of sloughing mucous membrane covering a large fatty imbedded between the mucous coat and muscularis in a free zone of bowel wall. The gangrenous was liberally excised, the fatty tumour was enucleated, the cavity was as far as possible obliterated by The parts having been thoroughly irrigated the wound was closed by two rows of continuous silk and the cœliotomy one by tier sutures. An convalescence ensued and the patient left the hospital month later. When seen in October, 1902, she reported her condition had continued normal since the operation.

Remarks by Dr. O'CONOR.—As the above affection is somewhat rare, possibly the notes of the only case I have with in a series of over 1000 general abdominal may be of some interest. Taking into consideration the of the patient, the gradual onset of gastric symptoms, loss of flesh, and the site of the tumour, I was disappointed in not finding some serious lesion in pylorus. Yet on reflection the latter might been eliminated if full value had been accorded to the absence of gastric dilatation and the history of old stomach trouble.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Treatment of Aneurysm by Subcutaneous Injection of Gelatin.—A Case of Aneurysm of the Abdominal Aorta treated by the Introduction of Silver Wire.

A MEETING of this society was held on June 23rd, Mr. ALFRED WILLETT, the President, being in the chair.

Dr. GUTHRIE RANKIN read a paper on the Treatment of *Aneurysm by Subcutaneous* Injection of Gelatin. After alluding to the work done by Lancereaux and others in connexion with the cure of aneurysm by gelatin Dr. Rankin showed that though not universally accepted there was considerable evidence to prove that the results were due to an increased power of coagulability produced by the gelatin on the blood. The best results were obtained when the use of gelatin was combined with rest in bed, restricted diet, and iodide of potassium given internally. The method of treatment by gelatin subcutaneously had not so far been extensively adopted in this country. Lancereaux advocated the injection of 250 cubic centimetres of a saline solution containing 2 per cent. of gelatin and considered that a minimum of from 12 to 15 injections was necessary. Huchard preferred a 1 per cent. solution as being safer. In four cases treated by Dr. Rankin at the Dreadnought Hospital 100 cubic centimetres of a 2 per cent. solution of gelatin were injected at each sitting after the first and the average number of injections was 17. The inner aspect of the thigh was chosen as the most convenient situation for the operation. The solution consisted ne ounce of gelatin and 131 grains of chloride of sodium 0 ounces of sterile distilled water. Details were given of four cases treated, in three of which the aneurysm was acic, while in one it was abdominal. In all four cases e was more or less marked improvement. The following lusions were arrived at:—1. That gelatin injections, n with proper precautions, were safe. 2. That they luced alleviation of all the subjective and many of the ctive symptoms. 3. That the relief of symptoms was ably to be explained by shrinkage of the aneurysmal and consequent diminution of pressure on surround- parts. 4. That such diminution could be demon- ted in three out of the four cases treated. 5. That after-histories afforded evidence of the permanent re of the beneficial results of the treatment.—Dr. MAGUIRE had treated eight cases of aneurysm by tin injections. In seven of these there was considerable rovement; the remaining case was practically relieved re coming under his care. In one case an aortic rgitant murmur present at the commencement of treat- t disappeared after the third injection, showing that it [illegible] to disease of the [illegible] appeared ready [illegible] a course of six ks' treatment. He alluded to the advantages of gelatin ctions over the ordinary methods of medical treatment in referring to the risk of tetanus to which one of his ents succumbed he laid stress on the importance of ing the solution of gelatin for ten minutes, whereby the lity of tetanus spores, commonly present in commercial atin,' was readily destroyed. He attributed the rise of perature to the introduction of a foreign proteid into the [illegible] the risk of clot-formation else- [illegible] other arteries were diseased.— [illegible] experience of gelatin injections one case in which the injection was followed by a rigor h collapse and persistent vomiting for three days. The thod was not free from dangers other than the risk of tnus.—Dr. A. J. WHITING asked Dr. Maguire how long a iod intervened between the first injection and the onset symptoms of tetanus. He also asked whether the gulability of gelatin was impaired by boiling.—Dr. GUIRE, in reply to Dr. Whiting, said that one week psed between the first injection and the onset of tetanus l that boiling did not impair the coagulability of gelatin. Dr. RANKIN, in reply, said that in none of his cases were re symptoms at any time to cause anxiety. He had not erved coagulation elsewhere than in the aneurysmal sac.

Mr. D'ARCY POWER communicated a paper by himself and G. H. COLT on a case of Aneurysm of the Abdominal rta treated by the Introduction of Silver Wire with a cription of instruments invented and constructed to ilitate the introduction of wire into aneurysms. The ient was a man, aged 29 years, who had acquired philis at the age of 17 years and had only been ated with mercury for a short time. He had noticed pulsating swelling in the right side of his abdomen two and a half years and had been constantly der treatment. On five occasions he had received injec- ns of gelatin in the gluteal region without any marked eration in the progress of the aneurysm. The sac of e aneurysm was extremely thin in places and as the e of the patient seemed to be in danger it was deter- ned that the sac should be exposed and the artery from ich it sprang should be ligatured, or if this were im- acticable the sac should be filled with silver wire. The elling was diagnosed as an aneurysm of the cœliac axis or one of its branches. The sac was accordingly exposed d as it was impossible to isolate it 80 inches of silver re, with a clotting surface of 3·7 square inches, were roduced by means of an instrument devised and made Mr. Colt. The actual introduction of the wire only ok two and a half minutes and there was no trouble in sing the hole in the sac with a few point sutures. The tient had a good night after the operation and was fairly mfortable on the following day. His pulse continued to o, however, and he died 50 hours after the operation. The st-mortem examination showed that the aneurysm sprang om the abdominal aorta just below the diaphragm. The c was full of recently clotted blood in which the wire s entangled. On cutting across the aorta seven ches of the wire were found projecting upwards into e arch of the aorta. The rest of the organs were rmal and the heart was healthy except for a patch of adherent pericardium. The instruments invented and constructed by Mr. Colt were three in number. The first instrument worked on the principle enunciated in the following terms: "If what is known to the mechanical engineer as a milling tool be made to revolve at a less distance than the diameter of the wire employed from the inner surface of the dorsal wall of a hollow tubular needle, the ventral wall of which has been cut away, the milling tool will grip the wire between itself and the needle and will wind it off the reel and drive it through the needle with a force only limited by the force at the disposal of the operator. It will, at the same time, snag or mill the wire." To carry out this principle a quarter-curved tubular needle was imbedded for about two inches of its length in the substance of a brass carrier. A semicircular incision was then made down to it through the brass so that the lumen of the needle was exposed. A milling tool was introduced at this spot to compress the wire with a steady grip as it passed through the needle, the pressure being made between the milling tool and the dorsal wall of the needle. The mounting of the needle was then bolted to the mounting which carried the milling tool, and it was then so geared up as to give the operator room to use the instrument without getting his hands too near the wound. A second hole was made in the tubular needle distal to the milling tool, and along this a stiletto was passed to block the hollow needle to its point whilst it was being pushed into the sac of the aneurysm. The instrument was further provided with a handle by which to hold it and with a second handle to revolve the milling tool. The second instrument differed in many important respects from the first. There were no gear wheels and the milling tool was driven direct. The needle was sufficiently long to remove the mechanism to a distance from the wound and the instrument was capable of taking a thinner wire than that taken by the one first invented. No stiletto was required and by an ingenious but simple device the wire, which was introduced in coils, could be divided into lengths at the will of the operator without withdrawing the needle from the sac of the aneurysm. Another method of wiring aneurysms consisted in the introduction of one or more cages of steel wire. These cages were so constructed as to form cylinders when they were compressed and the cylinders could be passed through a fine cannula into the sac of an aneurysm where they would immediately expand. The paper was illustrated by the epidiascope.

OPHTHALMOLOGICAL SOCIETY.

[illegible] Fistula Formation in the Treatment of [illegible] sarcoma of the Upper Lid.— [illegible] is Palpebrarum Muscle.

AN ordinary meeting of this society was held on June 11th, Mr. WILLIAM W. LANG, the President, being in the chair.

Major H. HERBERT, I.M.S., read a paper on Subconjunctival Fistula Formation in the Treatment of Chronic Glaucoma, either by producing a subconjunctival prolapse of the iris or by infolding the conjunctiva. The report dealt with 130 cases in which iris was left prolapsed under a conjunctival flap and in all but 18 eyes a small iridectomy was combined. A large number of these eyes were in an advanced stage of the disease and were therefore not very hopeful when an iridectomy only was done. For this reason a large incision was dangerous. The visual results of operations done from six months to upwards of three years previously were given. Only one eye had suffered from late infection and this gave way rapidly to treatment. In two eyes there was iridocyclitis immediately following the operation. In one case it caused partial occlusion of the pupil and in the other, which was somewhat neglected, it led to sympathetic ophthalmia with total loss of both eyes. The sight of another was lost through protracted delay in filling of the anterior chamber. These serious early complications were less numerous than when simple iridectomy was done. It was claimed that a filtering cicatrix could be obtained with certainty and that in some cases this was the only way to relieve the tension. At any rate, the risk was far less than if the tension was not relieved by the iridectomy. On the whole, the visual results were much better than could have been expected from typical iridectomy. Many cases of so-called atrophy of the optic nerve after operation were in reality due to unrelieved tension. A fistulous cicatrix was indicated (1) when iridectomy had already failed;

(2) where it was likely to fail, such as in advanced cases; and (3) when the patient was not expected to return for a second operation if one was required. The danger to the other eye was very remote and would probably yield to mercurial treatment or enucleation. The connexion of the iris with the prolapse could, if desired, be severed by a subconjunctival sclerotomy, cutting up through the attached base of the iris. The second method, by a subconjunctival infolding into a small sclerotomy wound, had proved effective in a number of cases. The aim was to establish a fistula unconnected with the uveal tract. By a special suture the flap could be kept in place long enough to keep separate the lips of the wound so as to form a permanent subconjunctival fistulous tract. The ten cases in which this was done were of too recent date to give a correct appreciation of its value. Other successful cases of conjunctival infolding without suture had been under observation for periods up to nearly two years. Many other attempts, however, failed to relieve tension through the flap not remaining infolded long enough; and in one eye the tension was far too much reduced. Apparently infective mild iritis came on and eventually detachment of the retina. 23 operations were performed without suture or with imperfect suture.—Mr. Priestley Smith, Mr. E. Treacher Collins, and Sir Anderson Critchett made remarks, and Major Herbert briefly replied.

Mr. H. Work Dodd communicated a paper on a case of Melano-sarcoma of the Upper Lid. The patient was a woman, aged 83 years, who had noticed a lump in the upper lid for six weeks. There was no pain at first but latterly there had been some. The tumour was situated in the centre of the upper lid and was of about the size of a hazel nut; there was no redness, œdema, or tenderness. On the under surface the growth was soft, jelly-like, and vascular. The eyeball was almost hidden by the growth but its movements were free. The patient had several wart-like growths about the body. The contents of the orbit were removed, the lower lid alone being left. A Thiersch graft was afterwards applied. Only 45 cases of primary sarcoma of the eyelid had been recorded: ten were melanotic and four of these originated in the palpebral conjunctiva. Van Duyse stated that: (1) of the few arising from the palpebral conjunctiva most were pedunculated, while those from the skin or mucous membrane were papillary in form; and (2) these attained a considerable size before extending into the surrounding tissues. In this case the tumour was pedunculated and it had affected chiefly the free surface, leaving the skin, orbicularis muscle, and tarsal plate intact and healthy. All these circumstances pointed to its origin being in the palpebral conjunctiva.

Mr. N. Bishop Harman read a paper on Innervation of the Orbicularis Palpebrarum Muscle. He outlined the observations which had led Mendel to the formulation of his hypothesis "that the frontal and orbicularis muscles, although peripherally supplied by the facial nerve, were 'eye muscles' and form the 'oculo-facial' group whose central innervation is the oculo-motor nucleus." He contended that the operation of excising these muscles in young animals which had been followed by a diminution of the cellular elements of the third nerve nucleus did not prove that the lost nerve cells were the central connexions of the nerve to the excised muscles, for by the very conditions of Mendel's operation—by the stitching the eyelids together—he had interfered with at least one proper eye muscle connected with the third nucleus, the levator palpebræ superioris, into the region of the nucleus of which Mendel sought to attach the orbicularis. Mr. Harman traced the ancestry of these facial muscles. In man there were superficial and deep layers of muscles more or less differentiated owing to the vigorous facial action of man; in lower animals—for example, lemurs—there were simple muscle sheets. In the sharks the earliest representatives of these muscles were found in connexion with well-developed eyelids and nictitating membranes. By an embryological investigation he had shown that these muscles were primarily the muscles of the spiracle gill which had been dragged forward for the service of the eye. In these fish the innervation was from the facial complex, the nerve proper to this gill. By reference to the work of Gaskell, which pointed out the different values of segmental nuclei, he showed how difficult it was to conceive the transference of the innervation of a "splanchnic" muscle from a splanchnic nerve and a splanchnic nucleus such as the seventh to a somatic nucleus such as the third; the thing was without parallel. In the phenomenon not rarely found in man, that of "associated jaw-winking movements," of which he exhibited a case, there was evidence th arrangements found in the fish still held good for ma these cases there was partial ptosis of one upper li putting into action the external pterygoid of the sam the eyelid was promptly elevated. This he showed "atavistic anomaly," the occurrence of that asso movement between jaw and gill which was always seen breathing of fishes. When the mouth of the fish open operculum covering the gills was relaxed. In these c jaw-winking movement in man, when the deep gill (pterygoid) contracted there was an associated relaxa the superficial gill muscle (orbicularis) which allow weak levator to pull up the lid.

Anatomical Society of Great Britain Ireland.—The summer meeting of this society was Liverpool on June 19th and 20th. The scientific proce included the exhibition of a large number of specin the practical anatomy rooms in University Colleg several papers and demonstrations which were given lecture theatres. Amongst the exhibits were the ing: models prepared by Professor Patten, illustrati Visceral Anatomy of the Hainan Gibbon and the T and Abdominal Viscera in Man; a model prepared F. W. Jones from sections of an early Human E a series of Radiographs prepared by Dr. C. T Holland and Dr. David Morgan; specimens of the Ci Willis, prepared by Dr. R. E. Kelly; the Brain an Photographs of the Cord of the Porpoise, by Dr. Wat and a specimen of the Human Lung, by Dr. T. R. Br who exhibited a number of preparations and dr made by Dr. A. T. H. Waters when writing his Fothe Prize Essay for 1859 on the Anatomy of the Human The preparations showed the arrangement of the a branching off from the terminal bronchial tubes. attention was drawn to Dr. Waters's observations proved at that early date that the blood in the br arteries returned to the left side of the heart b of the pulmonary veins and not to the righ by the bronchial veins, which merely returned from the structures at the root of the lung.—Dr. Bryce, whose work in connexion with karyokinesis known, gave a lantern demonstration of the Cells Embryo of the Lepidosiren.—Professor J. Symington forward some further work on the Relations of the Parts of the Brain to the Surface, a subject on which been engaged for some time past.—Professor A. T gave a most interesting and highly suggestive paper Evolution of Man's Cranial Form which he illustrat some ingenious models. The paper gave rise to an e discussion, in which Sir William Turner, Professor Cunningham, Professor G. D. Thane, and many othe part.—The work on June 19th terminated with account of the important investigations now bein out by Dr. A. W. Campbell of Rainhill Asylum, Lan which showed that there existed in the cerebral c direct correlation between physiological function and logical structure.—On June 20th Dr. O. Addi-o some further information on the Surface Marking Abdominal Viscera.—Professor Arthur Robinson some specimens illustrating the Development of the the Cranium and gave a brief outline of the conclus which he had arrived; he also gave the results of his vations on the Development of the Vitreous Body.—P A. H. Young and Dr. Peter Thompson read a paper with the Development and Morphology of the Renal A with Horseshoe Kidneys, and with the Ventrally-s Pelvis of the Ureter, of which deformity they showed specimens.—Mr. Lickley read a paper on the Relation Seventh and Eighth Ribs to the Sternum in Man.— Cameron gave a lantern demonstration of Secti Amphibia which showed the pineal body to be d mentally an amesial structure.

Plaistow and Canning Town Medical So —A meeting of this society was held on May 27th, Mr. Rose being in the chair.—Mr. J. Jordan Harvey ex a Large Bi-lobed Placenta, the cord being inserted junction of two equal lobes.—Mr. Rose showed tention Cyst of the Choroid Plexus.—Dr. L. A. delivered an address on Acute Abdominal Cases in G Practice in which he pointed out the extreme diffic diagnosis which these cases at times presented. He the importance of early and exact diagnosis and concisely the points of value in determining the question of operative treatment.—A short discussion followed and a hearty vote of thanks to Dr. Smith for his very practical address brought the proceedings to a close.

Reviews and Notices of Books.

A Treatise on Diseases of the Eye, Nose, Throat, and Ear for Students and Practitioners. By Various Authors. Edited by WILLIAM CAMPBELL POSEY, A.B., M.D., Professor of Ophthalmology in the Philadelphia Polyclinic; and JONATHAN WRIGHT, M.D., Laryngologist to the Brooklyn Eye and Ear Hospital. London: H. Kimpton. In two volumes, large 8vo. Vol. i., pp. vi. + 689; vol. ii., pp. 549. Price 32*s. net.*

THE plan of dividing a text-book into chapters or sections and confiding each division to a separate writer, with strict limitation of space, is from many points of view a good one. It has the disadvantages of some overlapping and of some want of unity, but these defects are more than compensated by the possibility of selecting authors who are well versed in the subjects assigned to them and are therefore qualified to speak with the authority of experience and who, as a rule, are not unwilling to compress into a reasonable compass the results of their reading and practice.

The first volume of this imposing treatise is devoted to the eye and is divided into 15 chapters, each from the pen of a different writer. It is illustrated by 19 plates and 358 woodcuts. The type is clear and good and the book contains singularly few clerical errors. Amongst the contributors we are glad to see the names of Mr. W. T. Holmes Spicer, one of the ophthalmic surgeons at St. Bartholomew's Hospital, London, who has undertaken the important chapter on Diseases of the Retina, Optic Nerve, and the Cerebral Origin of that nerve, and of Mr. E Treacher Collins of the Royal London Ophthalmic Hospital, by whom the chapter on Glaucoma has been written, a subject to which, amongst others, he has devoted much attention. A Canadian surgeon, Dr. R. A. Reeve, describes the Diseases of the Orbit, Lacrymal Apparatus, and Lids, and the remaining chapters are written by American surgeons, Dr. W. C. Posey of Philadelphia discussing the examination of the eye; Dr. W. N. Suter of Washington, the physiology of vision; Dr. A. Duane of New York, refractive errors in general; Dr. Casey A. Wood of Chicago, the motions of the eye and their derangements; Dr. John Weeks of New York, the diseases of the conjunctiva, cornea, and sclera; Dr. H. von Würdemann of Milwaukee, the embryology of the eye, the anomalies, diseases, and injuries of the iris, ciliary body, choroid, and vitreous; Dr. H Gifford of Omaha, Nebraska, sympathetic ophthalmia; Dr. E. C. Ellett of Memphis, Tennessee, diseases of the crystalline lens; Dr. Elmer G. Starr of Buffalo, New York, disturbances of vision without apparent lesion; Dr. C. F. Clark of Columbus, Ohio, the eye in its relation to general diseases; Dr. Clarence Veasey of Philadelphia, general preparation for operations upon the eye; and Dr. Edward A. Shumway of Philadelphia, the technique of the pathological and bacteriological examinations of the eye.

It is difficult within the limits of a review to refer to more than one or two of the chief divisions into which the whole of ophthalmology has here been cast, but as special attention is called in the preface to the chapter on the Eye in its Relation to General Diseases by Dr. C. F. Clark we turned to the pages of that essay and can recommend its perusal to every student and practitioner. Dr. Clark commences with "anæmia" which, he points out, is secondary to so many and such diverse pathological conditions that it is necessary to observe caution to avoid confusing the effects of anæmia proper with those of the disease on which it depends, and he believes that there is probably no one constitutional condition which more frequently plays a part in producing the various forms of asthenopia He has little doubt that the early and judicious use of those means—hygienic, dietetic, and medicinal—which tend to overcome anæmia could in a large number of instances delay for many years the necessity for correcting the low grades of hyperopia and astigmatism which are so important a feature in the practice of ophthalmology as seen in America. With this view we are quite in accord. At the *same time* the young American is probably more sensitive to slight defects in the refraction of the eye than the average European child or youth and he complains and seeks for relief at an earlier period. It is only gradually dawning on school teachers, and still more slowly on parents, that a low position in class of an otherwise intelligent child is dependent on imperfect vision as a rule and it is long before it is found convenient to take the child to an ophthalmic hospital or, when they have been ordered, to obtain the necessary glasses. The following remarks, too, are dictated by good sense and express well what has passed through the mind of every ophthalmic surgeon of experience. "The general asthenia which accompanies the anæmic state manifests itself as asthenopia, and this may be conjunctival, ciliary, muscular or retinal. It not unfrequently happens that after a prolonged struggle on the part of the ophthalmic surgeon to correct properly hyperopia, astigmatism, and muscular imbalance by means of spherical, cylindrical and weak prismatic lenses, and to relieve obscure reflex symptoms such as headache apparently due to eyestrain and obstinate photophobia and conjunctival irritation by appropriate treatment, it is found that large doses of a ferruginous tonic and a properly regulated life, with an abundance of out-of-door exercise, bring about complete relief from all the distressing symptoms, rendering glasses for the time being unnecessary. On the other hand it frequently happens that all of the best directed plans of general treatment completely fail when they are not supplemented by the most painstaking correction of all such errors of refraction and muscular imbalance." Dr. Clark discusses the affections of the eye associated with diseases of the vascular, respiratory, and digestive organs, and with the urinary, sexual, cutaneous, and nervous systems, and gives a good account of the relations of the eye to syphilis, which disease, it appears, only produces absolute loss of sight in about 2 per cent. of cases of blindness from all causes.

The chapter by Dr. Casey Wood on the Motions of the Eyeball and their Derangements will, if read carefully, supply all requisite information in regard to the defects of mobility which, formerly designated outward or inward, convergent or divergent squint, have been re-named collectively, heterotropia, and more precisely differentiated under the terms of esophoria, exophoria, cyclophoria, anaphoria, cataphoria, and the like. The symptoms and pathology of each form are given in detail. Dr. Wood approves, in cases where shortening of the muscle is required, the method devised by Dr. Frank Todd of making a "tuck" in the tendon, for the accomplishment of which a specially formed instrument resembling a pair of forceps with crossed legs is used.

Dr. Weeks, in his instructive chapter on the Diseases of the Conjunctiva, Cornea, and Sclera, adopts a new classification of conjunctivitis, dividing the varieties of this disease into the specific forms typically represented by gonorrhœa and diphtheritic conjunctivitis and the non-specific forms in which no specific cause has been hitherto recognised, as may be observed in simple and follicular conjunctivitis and in trachoma. An excellent drawing, after Orth, of the microscopic appearances after double staining of a section of trachomatous nodules is given and there are also useful drawings of the micro-organisms that have been found in various affections of the conjunctiva.

The subjects of Diseases of the Crystalline Lens and Cataract are treated by Dr. Edward Ellett at considerable length and very sensibly. No space is wasted in describing in wearisome detail the various forms and modifications of opacities of the lens, but after a few pages devoted to the structure of the lens, its embryology, the congenital anomalies which it presents, and the effects of wounds and injuries, the author proceeds at once to the consideration of cataract. The changes that may be observed in the structure of the lens are given and are illustrated by some excellent micro-photographic drawings from sections made by Dr. E. S. Thomson of the Manhattan Eye and Ear Hospital. In regard to the treatment of cataract Dr. Ellett considers "absorption treatments" and the administration of drugs to be futile measures, though alteratives may be occasionally beneficially prescribed. He thinks the utility of "ripening operations" in cases of immature cataract to be questionable. He assigns reasons which render it, in his opinion, advisable to operate on one eye, notwithstanding that the other is clear. He considers that the safest mode of operating for extraction is a preliminary iridectomy followed by removal of the lens after some weeks. The account of the accidents that may occur in the course of the operation is good and complete. The strength of the solution of cocaine to be instilled into the eye should have been given. We have known a 20 per cent. solution to be used by a nurse unaccustomed to ophthalmic operations with disastrous results. A 4 per cent. solution dropped in at intervals of half a minute for five minutes is usually sufficient to secure complete insensibility. The great importance of an exceedingly sharp knife in facilitating the operation might have been also insisted upon. Scarcely sufficient stress is laid upon the danger attendant upon the operation of needling the capsule in cases of secondary cataract. Dr. Ellett only remarks by way of warning that "provided the vision is not better than $\frac{20}{60}$, and the reduction of vision is not manifestly due to some other cause, the membrane should be divided," and various modes of dealing with it are described. It might easily be regarded by the young practitioner as a trifling operation that may be undertaken, providing no inflammatory symptoms are present, without misgiving. But the practised ophthalmic surgeon is well aware from bitter experience what dangers lurk in the simple proceeding of needling. Many a surgeon and many a patient have reason to regret that they had not left "well alone," and the dangers as well as the appropriate treatment might have been given, we think with advantage, in fuller detail.

In conclusion, we consider that amongst the many treatises on ophthalmology that have been recently published Vol. I. of Dr. Posey's and Dr. Wright's Diseases of the Eye, Nose, Throat, and Ear will occupy a distinguished place and may be regarded as an authoritative and altogether trustworthy exposition of the present condition of ophthalmology in the English language. We shall consider Vol. II., which deals with the Nose, Throat, and Ear, in a future issue.

Physical Chemistry: for Physicians and Biologists. By Dr. Ernst Cohen, Professor of General and Inorganic Chemistry in the University of Utrecht; authorised translation from the German by Martin H. Fischer, M.D., Instructor in Physiology in the University of California. New York: Henry Holt and Co. 1903. Pp. 343.

None can dispute the importance of a knowledge of physical chemistry if the great cause of medicine is to be advanced and happily there are signs of medical men becoming convinced of this fact and in accordance with this conviction of giving that attention to the subject which it demands. The present volume has been written in response to the request of a number of physicians to give in a series of lectures a *résumé* of those subjects in physical or general chemistry which are of importance in medicine. In all there are 14 lectures and the subjects comprise reaction of velocity, equilibrium, osmotic pressure, the molecular weight of dissolved substances, cryoscopy, and the theory of electrolytic dissociation and its applications. In a word, we find in this volume the scientific interpretation of well-known physical conditions and facts and as the nature of these becomes more understood so we may hope will treatment become less empirical. A drawback to the study of the exact scientific aspect of many physiological questions for the general practitioner, however, exists in the fact that a certain amount of mathematics must be studied and not every person has a mathematical mind. We do not know, however, a more suitable book to recommend than the one before us to those who are bent on possessing an accurate scientific idea of the many phenomena taking place in the human machine.

The Elements of Experimental Phonetics. By Edward Wheeler Scripture. London: Edward Arnold. New York: Charles Scribner's Sons. 1902. Pp. 627 and 26 Plates. Price 21*s.* net.

In this book Mr. Scripture has brought together a very large body of facts bearing upon the study of speech and the work is original in the sense not only of placing the author's own observations on record, but in the still more important sense that it gathers and focuses rays from many and widely separated lines of inquiry, thus bringing to light a new object of research. The mechanism of sound records, such, for example, as the Marey tambours, the gramophone, sensitive flames, and the like, forms one large division of the work. Another is devoted to the physiology of hearing and in close connexion with this comes a third branch—namely, the psychology of the perception of sound. A fourth division of the work is concerned with the mechanism of speech—that is to say, of the organs of speech—and treats incidentally of the anatomy of the mouth, the nose, and the pharynx; and a fifth deals with phonetics strictly so-called, that is to say, the elementary sounds, interruptions, and other audible signals of which vocal speech is built up. On all these subjects the author has read widely and to very good purpose and his book will form a worthy addition to the bicentennial publications of the Yale University. Indeed, to the study of its subject it is an indispensable aid. But it betrays haste in its preparation—as is perhaps natural in a work published under pressure of a ceremonial occasion. Experiments are described in great detail even when they are, as we may say, only half translated. For example, a large proportion of Mr. Scripture's experimental facts are drawn from German observers and need much explanation to render them intelligible to English readers. Thus the association of ideas is illustrated by the imperfect appreciation by a German experimenter of a German word half seen or incorrectly heard. Such experiments can be followed only at a great distance by an ordinary English reader and should be repeated for his benefit with the assistance of an English subject and English speech. The same kind of incompleteness runs through the entire work. A copious use of phonetic symbols—letters turned upside down and such-like conventional signs—is, of course, indispensable in such a work. But these symbols need explanation and receive much less than they require. An explanatory table appended to the book does something for the reader in this respect, but grudgingly. For instance, few readers will be greatly helped by the explanation that the symbol ɸ (printed in grotesque style as here) represents the Japanese "f," but Mr. Scripture vouchsafes no more. This is but an extreme instance of the obscurity, due to deficient explanation, which renders much of the book more or less unintelligible, and to such an extent as to be a serious flaw. But that notwithstanding, we have here a valuable contribution to a difficult and comparatively neglected line of study to which all students of the mechanism of speech will hereafter have recourse and from which much useful information and many illuminating hints may be drawn both by medical men to whom the phenomena of speech are symptoms and by teachers of languages to whom they are items in "the daily round, the common task."

La Gastro-enterostomia, Metodi Operativi, Indicazioni, Risultati. (*Gastro-enterostomy, Methods, Indications, and Results.*) Da Dott. ARISTIDE MATTÒLI, chirurgo primario, direttore dell' Ospedale Civile di Tolentino. Con 65 figure intercalate nel testo. Roma: Società editrice Dante Alighieri di Albrighi, Segati e C. 1903 Pp. 330. Price 7.50 lire.

THERE is no operation on the stomach which is of more importance than gastro-enterostomy. It is now the operation which is preferred in the greater number of the diseases of the stomach which come under a surgeon's treatment and yet it is comparatively new. In 1881 Wölfler started to perform a pylorectomy for a malignant growth of the pylorus, but found that the tumour was so extensive and adherent that it was not possible to remove it. Nicoladoni, who was assisting at the operation, suggested that an anastomosis should be made between the stomach and the small intestine This was done and the patient recovered from the operation but died four months later from cancerous cachexia. At first only performed for irremoveable growths of the pylorus gastro-enterostomy has now come to be employed for many other conditions, and Dr. Mattòli gives 11 conditions for the relief of which it may be performed. They are malignant disease of the pylorus, cicatricial contraction of the pylorus, narrowing of the pylorus from extrinsic causes, syphilitic or tuberculous disease of the pylorus, congenital pyloric stenosis, gastric ulcer, ulceration or narrowing of the duodenum, hour-glass stomach, gastroptosis, gastric dilatation, and severe dyspepsia. An operation applicable to so many conditions deserves careful study and the author has collected in this volume an account of all the methods which have been employed; he also gives very elaborate statistics of the operation. In all he has collected 1028 cases, of which 819 recovered. Dr. Mattòli has had 17 cases of his own and all of them were successful. The work is very thorough and is by far the best treatise on this valuable operation, though, unfortunately, it is only available to those who can read Italian. We may mention that the printing of the book is excellent.

An Atlas of Illustrations of Clinical Medicine, Surgery, and Pathology. Compiled for the New Sydenham Society (a continuation of the "Atlas of Pathology"). Fasciculus XV. (Double Number), or III. and IV. of the New Series: Xanthelasma and Xanthoma, with special reference to their association with Functional and Organic Diseases of the Liver. Plates A to M and XCII. to XCVII. London: The New Sydenham Society. (Agent, H. K. Lewis.) 1902. Price to non-members 1 guinea.

THE New Sydenham Society has done much useful work. It has issued an excellent Atlas of the Diseases of the Skin and also one on Pathology and a valuable Lexicon of Medical Terms, in addition to a very large number of translations of important foreign works on medicine. It has now commenced a very great undertaking: it intends to issue a large atlas containing illustrations of disease as seen in the living patient and this will, it is hoped, "constitute a guide to diagnosis of great value to the practitioner in all departments of our profession." The double section before us contains illustrations of xanthelasma and xanthoma. The general practitioner may be inclined to ask of what use to him is a series of plates illustrating xanthoma which he is hardly likely ever to see. There may seem at first sight some justification for such a question, but on reflection it will be seen that it is of great importance to be able to recognise xanthoma easily because it is frequently associated with diabetes and it may lead to an examination of the urine when no symptoms point to diabetes. Thus one who could diagnose xanthoma might be able to diagnose diabetes early, while many would fail to detect the diabetes because they had not recognised the xanthoma. We urge all members of the profession to subscribe to this valuable atlas; no one could fail to learn from it, for the eye learns more readily and retains more firmly than the ear. The plates are excellent; 14 of them are in black and white and eight are coloured.

The Chemical Changes and Products resulting from Fermentations. By R. H. ADERS PLIMMER, D.Sc. Lond. London: Longmans, Green, and Co. 1903. Pp. 184. Price 6s.

FERMENTATION has afforded a very interesting theme for study and the subject has developed enormously during the past decade. It means now something more than the mere conversion of sugar into alcohol by means of yeast or yeast metabolic products, yet we may be pardoned for pointing out that the name had its origin in the boiling appearance of grape juice during its conversion into wine. Dr. Plimmer has presented us with an admirable essay which though not voluminous conveniently and accurately summarises our present knowledge of the subject and his book is valuable because it brings into review in relatively small scope the upshot of the numerous researches that have now been made. As fresh discoveries come to light our preconceived ideas have of course to be modified. No better instance of this can be cited than the discovery by Buchner of a soluble ferment or enzyme existing in yeast which can set up alcoholic fermentation in saccharine fluids. The change was previously regarded as solely the result of the life of the yeast cell. We should have thought that Dr. Plimmer would have referred more fully to Buchner's work, whereas in point of fact he makes quite slight references to it. Considering how radically Buchner's work is calculated to alter our views as to fermentative change being produced by the living organism and not by the enzyme which it secretes this aspect of the question might have been dealt with much more fully than has been done. This does not, however, detract from the value of the work as expressing the position clearly and concisely at the present time. Dr. Plimmer sums up this position as follows: (1) That the active agent in all cases is a living organism; (2) that this organism sets up either by its own metabolism or by bodies secreted by, or excreted from, it changes in substances of different constitution—e.g., carbohydrates and albumin; (3) that these changes are principally hydrolytic and that some are oxidative and a few are reductive; (4) that the results of these changes are generally simplifications of the original body; and (5) that in certain cases synthesis occurs. At the end of the volume there is an excellent bibliography as well as a complete index of authors.

LIBRARY TABLE.

The Building of the Body. By ALBERT BROADBENT. Manchester: Albert Broadbent. 1903 Pp 119. Price 2s. 6d. —This little book, which purports to deal with "the development of health and strength and prevention of disease by wisely selected food," begins with a completely unnecessary marshalling of evidence to prove that the food of a nation is important to the nation. It goes on to give specimen diets, of which three-quarters are vegetarian and all are faddy, and closes with a note of personal experience, a eulogy of nuts as food, and a string of figures purporting to show the chemical composition and nutritive value of food. Mr. Broadbent, it appears, suffered for ten years from biliousness, "so much eventually that his friends said he had cancer of the stomach." Some months ago, he informs us, he added to a diet "largely makeshift—white bread, potatoes, and a little butter"—a fourth meal "of not more than four or five ounces bread and butter and a simple beverage eaten immediately before retiring." Apparently—we say apparently, for Mr. Broadbent is not a pellucid writer—his symptoms of cancer have abated and the "dandruff which he had has vanished." It would be easy to quote from this book passages to show that Mr. Broadbent has no particular qualifications or knowledge justifying him to aspire to instruct the public on such a topic as the prevention of disease by diet.

The Dentists Register. London: Spottiswoode and Co. 1903 Price 3*s.* 4*d.*—The Dentists Register for 1903 shows that the names of 4617 dentists now appear on the official roll. Of these 2106 hold qualifications from the different corporations—viz., from the Royal College of Surgeons of England (1243), the Royal College of Surgeons in Ireland (421), the Royal College of Surgeons of Edinburgh (274), and the Faculty of Physicians and Surgeons of Glasgow (168); while 2466 practise upon their declaration that they were in *bonâ-fide* practice of dentistry before July 22nd, 1878. The small residue of names are those of dentists practising in right of medical degrees and diplomas and of dentists with colonial or foreign degrees. It will be seen that the number of dentists practising upon diplomas obtained by examination now amounts to over 45 per cent. of the total number of the roll.

Health and Home Nursing. By FLORENCE L. MATHER. London: James Clarke and Co. 1903. Pp. 122. Price 1*s.*—The articles of which this book is composed have appeared in serial form in the *Newcastle Weekly Chronicle.* We can understand that for publication in such form they were very well fitted, and on the whole we think that they are worth re-issue in a volume, for although their information is very elementary and is contained in books already published, still it is put in an extremely clear and readable manner, while the large extent of ground indicated by the title is covered as far as essentials are concerned.

An English Handbook to the Paris Medical School. By A. A. WARDEN, Visiting Physician to the Hertford British Hospital, Paris. London: J. and A. Churchill. 1903. Pp. 74. Price 2*s.*—The design of this little book is to enable the *étranger* to find at once the post-graduate or special medical work that he has come to Paris to pursue, and as it is written on a very comprehensible and orderly plan it should prove very useful. All the more important hospitals of Paris are set out, the names of the medical staffs are given, together with their special subjects, and the hours when they operate or lecture. A daily diary is compiled for the post-graduate student from this information, while information is added about various museums and libraries. Lord Lister and Professor W. W. Keen testify in prefatory letters to their belief that Dr. Warden's little book is wanted and we agree with them. The information is often asked for and it has never been available before.

The Indian Medical Service, Past and Present. By Surgeon-General W. B. BEATSON, M.D. London: Simpkin, Marshall, Hamilton, Kent, and Co. 1903 Pp. 59—Surgeon-General Beatson, late Deputy-Surgeon-General of the Lahore Division, has republished in book form an interesting article upon his distinguished service which appeared last year in the *Imperial and Asiatic Quarterly Review.* He tells the story of the early ships and chirurgeons of the East India Company and shows the value of the services rendered by Gabriel Broughton, surgeon of the ship *Hopewell*, to his country when he asked as a reward for his medical and diplomatic services at the Moghul Court liberty for the English to trade free of duty with Bengal. Broughton's talents and self-sacrificing zeal must always be regarded as having laid an essential part of the foundation of our Indian Empire. Other famous members of the Indian Medical Service whose exploits are narrated in full are J. Z. Holwell, the historian of the "Black Hole," and Surgeon Fullerton, the survivor of the Taka massacre. Surgeon-General Beatson's pamphlet ends with a comparison of the present and past position of the officers in the Indian Medical Service in which he speaks words of unstinted praise of the service as "the best paid and best pensioned medical service in the empire." We refer our readers to our report of the annual dinner of the Indian Medical Service[1] for obvious evidence that the whole service does not share Surgeon-General Beatson's rosy view.

Le Traitement de la Constipation. Par Dr. FROUSSARD. Paris: J. B. Baillière et Fils. 1903. Pp. 95. Price 1 fr. 50 c.—In this little book the author has summarised modern knowledge of a common symptom in various pathological conditions with considerable shrewdness and neatness; but it is difficult to see how such a subject as constipation can be advantageously considered by a medical man as a separate entity having even the most general rules of treatment, local or hygienic. The public, at whom Dr. Froussard's lessons may be aimed, can learn both from the author and from a preface supplied by Dr. Maurice Soupault that indiscriminate self-drugging with purgatives is useless and dangerous.

The Mother's Guide to the Care of Children in Sickness and Health.—By Dr. LYDIA LENEY. London: C. Arthur Pearson, Limited. 1903. Pp. 253. Price 3*s.* 6*d.*—Dr. Lydia Leney is well qualified by her appointments to write a small book to be of use to mothers who living in rural districts or sparsely populated colonies need a practical guide to which they can refer in cases of illness or accident until medical aid can be obtained. Of course, when a practitioner takes upon herself or himself the responsibility of giving advice to laymen the difficulty must be faced of how much to tell. Now in spite of the simplicity of Dr. Leney's language and the absence of pathological theorising, a considerable amount of medical knowledge is, to our mind, often required to follow her teaching. This may lead to difficulty.

JOURNALS AND MAGAZINES.

International Clinics. A Quarterly of Illustrated Clinical Lectures and specially prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pædiatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose, and Throat, and other topics of interest to students and practitioners. By leading members of the medical profession throughout the world. Edited by HENRY W. CATTELL, A.M., M.D., Philadelphia, U.S.A. Vol. III., Twelfth Series, 1902, pp. 306; Vol. IV., Twelfth Series, 1903, pp. 312. London: J. B. Lippincott Company. Price 10*s.* 6*d.* per volume.—This interesting quarterly is hardly as well known in this country as it deserves to be. Each year four volumes are published and each volume contains a large number (from 25 to 30) of clinical lectures on important subjects delivered by well-known hospital surgeons, not only of the United States of America but also of many other parts of the world. For instance, in one of the volumes under review there are a lecture on the Treatment of Urticaria by Professor Hallopeau of Paris; one on

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[1] THE LANCET, June 20th, 1903, p. 1761.

Surgical Intervention in Gastric Dilatation, by Professor A. Cardarelli of Naples; and one on the Treatment of Face Presentations, by Dr. Robert Jardine of Glasgow. In addition one or two other articles are added; we may specially mention a useful article on the Blood in Health and Disease by Dr. Thomas S. Brown of the Johns Hopkins Medical School; this occupies nearly 100 pages and reviews all the recent work on the changes in the blood in disease. We think that there is no more pleasant way of keeping in touch with the latest developments in medicine than by subscribing to, and reading, this quarterly.

The Cornhill Magazine.—This magazine continues its series of articles upon Prospects in the Professions. In the June number "Medicine" is considered. The writer of this contribution has a thorough grasp of the whole subject and although no name is given it is evident that he must himself be a member of the profession about which he writes. A large amount of useful information is afforded. The actual selection of a school is quite rightly not touched upon, but for the benefit of those who are not acquainted with the internal working of such an institution it is pointed out that a medical school in the present day is a very serious and highly organised academic institution, spending vast sums on its museums, laboratories, and class rooms, and carrying on its work by the help of a large staff of lecturers, demonstrators, tutors, and clerical teachers. The intending student is warned as to what is before him by the words, "The modern student, if he wishes to qualify at all, is one of the hardest worked young men to be found. ...... A modern medical school is no place for an idler, and idlers are sooner or later requested by the authorities to 'move on.'" Very excellent remarks are also made as to the courses which may be pursued when all the examinations have been successfully passed. The young practitioner may embark in general practice, he may enter one of the public services, or he may qualify himself for "consulting work." The pages devoted to this article will well repay perusal. When a young medical man has just become qualified, it is often a very difficult matter for him to decide as to what he shall do next. Unless he can take the advice of a relative or friend well posted in such matters, he may adopt a branch of the profession for which he is entirely unfitted. In the article now under consideration the whole matter is briefly but ably set forth, and it may well be consulted by those who are not sufficiently informed on medical matters to enable them to arrive at a decision as to the course of professional life that they should enter on.

THE ETIOLOGY OF LEPROSY.[1]

AT a meeting of the Bombay Medical and Physical Society held on March 20th a discussion, introduced by Mr. Jonathan Hutchinson, F.R.S., took place on the Etiology of Leprosy.

Mr. HUTCHINSON said he was there as a representative and advocate of a theory that the true explanation of the cause of leprosy would be found in connexion primarily with a fish diet. He cited the circumstance that in South Africa leprosy was a new disease and that there was no leprosy at the Cape till the Dutch farmers brought large numbers of Hottentots to work on their farms. The Hottentots never ate fish and never had leprosy before, but the Dutch were obliged to feed them on large quantities of dried fish. The speaker then proceeded to argue that leprosy was not spread in South Africa by contagion. He was of opinion that the only way in which the living bacillus could be received into the system was by the stomach and that such communication took place when food was eaten which had been contaminated by discharges from a leper's hands. It was known that in India lepers sold sweetmeats and fruits and it could be conceived that children might be tempted to buy such articles contaminated as they might be with the discharges of the sellers. This was a way in which they could account for the occurrence of leprosy in a certain number of lepers in India. His suspicion was that in leprosy they had only a form of tuberculosis. Although he fully admitted that leprosy was communicable by food he was prepared to deny that the disease could maintain itself in any non-fish-eating community. Mr. Hutchinson next took up the question of the transmission of leprosy by heredity and maintained that the transference by inheritance or by touch was quite out of the question. He believed that the spread of the disease in the Middle Ages was due to the influence of the Roman Catholic religion which enjoined fish fasts in Lent. A glance at his "leprosy globe" would show that over the whole world the regional prevalence of leprosy was chiefly on the sea coast, on islands, or in river valleys. The results of his tour in India had satisfied him that the fish theory was now better understood in India than before.

Mr. ARTHUR POWELL said that leprosy belonged to a group of diseases known as the infective granulomata and pathological analogy supported the belief that leprosy was no exception to the laws of its group of diseases, but was an inoculable and contagious disease. He remarked that Mr. Hutchinson admitted that the bacillus of Hansen was the direct cause of leprosy, but wished it to be believed that practically the only way that it was taken into man's system was by the consumption of badly cured fish. He pointed out that numerous attempts had been made to grow the lepra bacillus on media prepared from fish in many ways and all with the same negative result. He said that in South Africa the introduction of the disease was more likely to be due to contact with the Malay fishermen, among whom the disease was prevalent, than to a *de novo* growth of bacilli from eating fish, and he quoted the case of New Caledonia where at the time of his birth leprosy was unknown and the people had always eaten fish. A Chinese leper came there who introduced no variation in the fish-eating habits, but leprosy quickly spread. Mr. Powell was of opinion that Mr. Hutchinson had wholly failed to prove his theory. He was loth that any theory should blind the people of India to three known facts: (1) that leprosy was believed by all competent authorities to be due to a specific bacillus; (2) that the bacillus had never been found anywhere except on the person or in the discharges of a leper; and (3) that no authentic case of leprosy had ever been known to arise where contact with a leper or his discharges was not possible.

Mr. N. N. KATRAK said that judging from the experience of other diseases a bacillus alone was not sufficient to account for the production of this disease. A predisposition of the constitution was also an important factor and it was possible that fish-diet might be one of the causes that predisposed the human body to develop leprosy. He hesitated to accept the view that fish-diet was the only or chief cause. Want of sanitary measures, ignorance, and poverty contributed to the spread and continuance of diseases like leprosy.

Mr. HUTCHINSON, in reply, stated that he could not accept the suggestion of the last speaker that leprosy was due to general poverty or unhygienic conditions. He believed that one of the causes of the disappearance of leprosy from Northern Europe was the greater pains taken in the curing of fish and the better quality of the salt used. In reply to [illegible]

therefore be infectious. This was reasoning in a very vicious circle. Mr. Powell was a contagionist, but he must controvert the facts which seem to show that leprosy was [illegible] South Africa were as [illegible] of *de novo* [illegible]

In proposing a vote of thanks to Mr Hutchinson the Hon. Sir B. KRISHNA said that now that Lord Curzon's Government had reduced the salt duty by eight annas he hoped that pure salt would be used in the curing of fish and thus a source of danger would be removed.

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[1] Transactions of the Bombay Medical and Physical Society, vol. vii., No. 2, March, 1903.

was brought, were vaccinated. Her vaccination followed the usual course and the fact that it had taken place was discovered by her parents on her discharge from the hospital which took place on April 17th, when the action was started.

At the hearing of the action at the county court the evidence on behalf of the defendant was put before the judge with considerable force and clearness. It was pointed out that to have communicated with the parents of all the children, drawn as they were from a large district, would have caused so much delay that it would have diminished or nullified the protection obtainable from prompt vaccination; that to have allowed the wishes of objecting parents to prevail would have necessitated the isolation of their unvaccinated children or the sending of them home to carry scarlet fever or small-pox, or both, to their neighbours; and that the isolation in order to be complete would necessitate a separate room for each child together with the isolation of those attending upon her. Dr. E. W. Hope, medical officer of health of Liverpool, added his evidence to that of the defendant. His long experience and ample qualification to speak with authority gave weight to his words when he informed the court that in his opinion Dr. Brindley had only one course open to him in the circumstances, and that was to extend the known protective measures to all the persons in the ward who had been exposed to infection. He believed that the delay of one day, necessary to communicate with the parents, would have involved the lives of several of the children, and in reply to a question from Judge Bradbury, answered, "I should say there was not one hour to lose. If Dr. Brindley had not taken the steps he did he would have been guilty of negligence." The assent of our readers will be accorded without question to these propositions, but we call attention to them as illustrating the evidence necessary to be given in such cases. A judge and jury have to base their decisions upon evidence, and unimpeachable testimony strictly bearing upon the issues raised, given with as little ambiguity as possible, will always command the attention due to it. In the case at Bury the judge had at an early stage pointed out that although the certificate of conscientious objections obtained by the father in respect of the child exempted him from penalties for not having his child vaccinated it did not in any way forbid the vaccination or render it unlawful. His Honour further pertinently observed that as the child had been vaccinated and was none the worse for it the father's "conscientious belief that vaccination would be prejudicial to the health of the child" would appear to have been without foundation. In deciding in favour of the defendant, he held that although the act of vaccination against the wishes of the parents might be an assault if performed without cause such as existed in the case before him, nevertheless Dr. Brindley had to determine to the best of his judgment what was the proper course to follow, and in doing that he had to take into consideration all the circumstances. The whole case, in short, depended upon whether in the circumstances considered as a whole, it was reasonably right, having regard to the imminent danger, to vaccinate without communicating with the parents or taking any other steps preliminary to action.

It was, of course, beyond dispute throughout that Dr. Brindley had acted with the sole object of protecting to the best of his ability both the child vaccinated and the other children under his charge. He is to be congratulated warmly upon having so far established his position, and any appeal raised upon the question of law will be watched with considerable interest by the medical profession. It may also be suggested that principles are involved in a case of this kind which should affect the actions of physicians and surgeons in many emergencies. A child, for example, may be brought into a hospital suffering from the result of an accident and an operation considered to be necessary may be performed at once. The parents may hold, from religious or other motives, views hostile to all interference with injury or disease. It would be a serious matter, if on the recovery of the child, an action for assault could be brought, not on account of any injury sustained, but on account of a right claimed by the parents to have their permission obtained as a preliminary to anything done on behalf of their offspring. The strict limits of "technical assaults" in cases where medical practitioners cannot quickly get the consent of a person capable of consenting might be laid down by a court of appeal to the advantage and instruction of all, but until this is done the principles enunciated by the county court judge at Bury will appear to reasonable persons to be consistent with justice and good sense.

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The Traffic in Diseased Meat.

It seems to be a law governing procedure in public health administration in this country that before reform can be brought about there must be very serious danger, or even death. It is often to no purpose that a Royal Commission sits for many years, cross-examines experts, visits foreign countries, and finally delivers itself of a report, or series of reports, concluding with recommendations aimed at a better state of affairs. Unless the public conscience is very acutely awakened, and the pressure upon Parliament is such that resistance is obviously undesirable in a political sense, these recommendations are liable to become little better than a series of pious opinions. The second Royal Commission on the Control of Tuberculosis made certain suggestions with regard to the qualifications of meat inspectors. The commissioners, in effect, expressed the opinion that those whose duty it was to protect the public against the consumption of diseased meat might be reasonably expected to possess knowledge superior to that possessed by a plumber, a carpenter, or even a butcher. But recommendations and suggestions notwithstanding, the meat inspection of this country is far from being on a satisfactory footing, and the county borough of Hull has recently afforded an instructive example of the conditions under which the meat traffic of a large city may be carried on.

It appears that certain outbreaks of anthrax occurred in farms in the East Riding of Yorkshire and the cases were not in every instance duly notified to the authorities. Moreover, certain of the carcasses found their way to Hull and were there overlooked by the meat inspectors. Much local excitement was occasioned thereby and a special committee of the corporation was appointed to investigate the matter. Fortunately the committee included among its members several medical men and in consequence of this the inquiries were of a searching character. As to the meat inspectors, investigation showed that they were not familiar with the pathological appearances of anthrax. But this lack of expert knowledge is probably shared by a very large number of meat inspectors throughout the country and perhaps this aspect of the inquiry was quite sufficiently pressed by the committee. The most interesting and striking fact that the inquiry elicited was that a large number of carcasses of cattle which have died from disease, or been killed because diseased, find their way from the surrounding country into Hull where the numerous distributing centres and private slaughter-houses render a proper control of such carcasses a difficult matter. It seems that these carcasses are not sold in the country districts because the history of the cattle is too well known, and hence there has arisen a race of what are called "carrion butchers" who after dressing the carcass and destroying, if necessary, the offal, consign it to Hull. The understanding seems to be that if the carcass passes the meat inspector the owner receives payment, while if the carcass is seized no opposition is offered and no money is forthcoming. There is a remarkably law-abiding attitude about these "carrion" butchers or dealers and their non-resistant pose is admirably calculated to aid the end which they have in view. In one case the evidence points to the conclusion that a healthy spleen was substituted for that which properly belonged to the carcass. All these devices are doubtless well known and practised in the "carrion" trade; indeed, we once heard of a suspicious-looking funeral procession being stopped at the confines of a large Irish city when the hearse, which was followed by mourners, was found to contain the carcass of a cow which had died, or which, as the phrase goes, "had been killed to save its life."

The Hull meat inspectors have undoubtedly been slack in prosecuting inquiries as to the origin and history of carcasses brought into the city, and reform is obviously called for. But the circumstances revealed at Hull are but part and parcel of the important problem of a better supervision of our foodstuffs, not only in urban but also in rural districts. This importation of diseased meat from rural into urban districts should be dealt with by proper coöperation between the two authorities or better still by some larger authority, such as the county council, which will be able to inform itself of the movements of diseased cattle and of suspicious carcasses. The committee of the Hull corporation has made certain recommendations such as the appointment of a chief meat inspector who shall also be a bacteriologist. This is a sound recommendation, but we trust that in appointing a bacteriologist it will also be seen that he possesses a sound pathological knowledge and is not unmindful of the tricks of the trade. The committee also advises that carcasses of meat intended to be sold to retailers should be taken to a separate depôt for inspection, that all condemned meat should be sent to the destructor instead of to the manure works, and that when an inspector seizes the carcass of an animal which has been affected with any communicable disease he shall notify the superintendent of police of the district from which the animal has come. We must confess that in addition to this excellent advice we should have been glad had the committee seen its way to recommend that an abattoir fitted with all modern appliances and means for refrigeration should be erected in Hull. A town with a quarter of a million inhabitants might well set the example. So long as animals are slaughtered behind a shop or in private slaughterhouses there will be no reform in England such as that which took place in Germany many years ago and we still hope that Hull, instead of adopting a more or less stop-gap policy, will undertake a thorough scheme. Possibly the committee was depressed by the returns which it received from other large towns in most of which there still remains much to be done. But Hull can well afford to lead rather than to follow and the medical men in the corporation should see that the opportunity is not lost.

Annotations.

"Ne quid nimis."

THE BALLACHULISH CASE.

JUDGMENT was delivered in the Court of Session, Edinburgh, on June 19th in an appeal against a decision of Lord Kyllachy, granting the Ballachulish Slate Quarries Company, Limited, interdict against Dr. Lachlan Grant, West Larroch, Ballachulish, from carrying on his practice as representing them in Ballachulish. Dr. Grant was in 1900 appointed medical officer to the employés of the quarry, a certain sum being deducted from the wages of the men each week for fees to the defendant. The Lord Justice Clerk, giving the leading opinion, said: "At first sight this case presents a very narrow aspect but on minute examination of the merits and elements I can only come to one conclusion. The defendant was engaged by the Quarries Company, and by them only, to act as medical adviser to their employés. Being engaged by plaintiffs, who else was to dismiss him, even granting that his salary was made up of weekly deductions from the men's wages? Of course, I quite recognise that had the employés had a voice in the selection of the physician another light would have been thrown on the case, but this was not so, and taking everything as it stands I am of opinion that the decision of the Lord Ordinary was a perfectly correct one and think that it should be upheld." Lord Young said: "I am of opinion that defendant is entitled to *absolvitor* in respect that the plaintiffs in dismissing him signified that they no longer gave him their authority to act as medical man to their employés and that so far as they were concerned he was to act no more after a certain date. On this becoming public the workmen held a meeting which was attended by landed proprietors and other influential persons in the district. At that meeting it was unanimously agreed that defendant ought to be kept on. Plaintiffs, however, paid no attention to this and persisted in their determination to dismiss Dr. Grant. Now who were the best judges of the competency of defendant? Who had the best right to move for the dismissal or retention of the defendant? The workmen whose contributions were going to make up defendant's salary and who, along with their families, were being attended by defendant, or plaintiffs who were acting as agents through whom defendant was engaged? Then one had to take into consideration the number of workmen employed. There were, it was said, over [illegible] men employed in the quarry and surely the desire of [illegible] men ought at least to have been heard. On the [illegible] matter I think this interdict ought to be dismissed."

Most of the cells had disappeared without leaving any trace of their existence; the remaining cells showed pigmentary degeneration and confluence of the Nissl's bodies into a homogeneous mass. The tracts of degeneration became more superficial as they were traced downwards through the dorsal and into the lumbar segments of the cord. The pathological changes are summarised as comprising, first, a uniform disappearance of the motor cells in the spinal cord and especially in the cervical and lumbar enlargements; secondly, a degeneration of a zone of nerve fibres in the antero-lateral region skirting the cornua in the cervical region; thirdly, a proliferation of neuroglia in the degenerate areas of white matter and within the anterior cornua, the proliferation being denser in the cervical than in the lumbar region; fourthly, atrophy of the anterior spinal nerve roots; and, fifthly, relative integrity of the crossed and direct pyramidal tracts in the cord. The lesion is apparently a primary atrophy of the anterior cornual cells comparable to progressive muscular atrophy, with the addition that commissural fibres passing longitudinally as well as transversely in the spinal cord from segment to segment are also affected, thus producing the tract or zone of degeneration referred to above. The pyramidal tracts are affected late in the course of the disease and only to a slight extent. This view of the pathogenesis of amyotrophic lateral sclerosis suffices, adds Professor Collins, to harmonise the various observations of Charcot, Leyden, Déjerine, Gowers, and Dana. The cerebral cortex is not affected except very late when there occur symptoms of dementia, such as depression of spirits, meaningless laughter and weeping, and suicidal impulses. All of these symptoms were present in the above case. "The point to be emphasised," adds Professor Collins, "is that mental symptoms occur with considerable frequency in this disease and rarely in progressive muscular atrophy." The etiology of amyotrophic lateral sclerosis still remains obscure. A study of the 104 cases—viz., 94 typical cases collected from medical literature and 10 personally observed—gives the sexes in the proportion of 55 males to 49 females. 30 patients were between 30 and 40 years of age, 29 between 40 and 50 years, and 28 were between 50 and 60 years. The average duration of the disease was slightly over two years, the majority of cases running a course of from one to five years. Probably we must look to pathological chemistry, concludes Professor Collins, for the discovery of the real morbific agency.

STREET COLLECTIONS.

THE amiable ladies and enterprising hospital secretaries whose enthusiasm in the cause of charity takes the direction of rattling, or of instigating others to rattle, money-boxes in the street are probably not aware that the proceeding brings them within the letter of the Vagrancy Act, 1824, and renders them liable to a penalty calculated to have a distinctly discouraging effect upon their zeal. By Section 3 of the Act it is provided that "every person wandering abroad or placing himself or herself in any public place, street, highway, court, or passage to beg or gather alms, or causing or procuring or encouraging any child or children so to do, shall be deemed an idle and disorderly person within the true intent and meaning of this Act." The punishment regarded by our legislators as appropriate to the offence is imprisonment with hard labour for not more than one month. It is, however, not practicable to deal with the matter quite in this spirit and although the passer-by may have resented being badgered by a ragged youth whose *bona fides* could not be regarded as sufficiently established by the printed label on the box thrust in his face, it has hitherto been the lesser evil to abstain from reprisals. In order to supply a more satisfactory means of protecting the public Mr. Akers-Douglas has introduced a Bill to regulate street-begging for charitable purposes. This end is to be achieved by extending the powers given under Section 11 of the Metropolitan Streets Act, 1867, to the Commissioner of Police or to the Commissioner of City Police acting with the consent of the court of mayor and aldermen. With the approval of "one of His Majesty's principal Secretaries of State" either of these authorities will be enabled to make regulations "to be observed by all persons within the general limits" of the Act of 1867 "with respect to the places where, and the conditions under which, persons may collect money in any street for charitable or other purposes." The "general limits" here referred to comprise the region included in a circle of four miles' radius the centre of which is at Charing Cross. The Bill is no doubt aimed mainly at the demonstrations by the unemployed which have been something of a nuisance this year, but it will serve to check also the abuse of charity which is too frequently committed, professedly in the name of certain hospitals.

THE RELATION OF CHRONIC ENGLARGEMENT OF THE SPLEEN TO ANÆMIA IN INFANCY.

THE *Boston Medical and Surgical Journal* of May 28th contains an important article on the Relation of Chronic Enlargement of the Spleen to Anæmia in Infancy by Dr. John L. Morse. The blood of infants under the age of two years differs from that of adults. The amount of hæmoglobin, though high for a short time after birth, is low afterwards. The number of leucocytes per cubic millimetre is greater than in adults, averaging from 10,000 to 14,000. The percentages of the various forms are as follows: small mononuclears, from 50 to 70; large mononuclears, from 5 to 15; polynuclear neutrophiles, from 30 to 40; and eosinophiles, from 1 to 10. Thus the proportion of mononuclears is about thrice that of adults and of polynuclears only about one-half. All pathological changes in the blood are exaggerated in infancy. Dr. Morse gives notes of 22 cases of chronic enlargement of the spleen in infancy in which complete examinations of the blood were made. Rickets was present in all but two cases. The splenic enlargement and blood changes were considerable in two of the three cases in which the rachitic changes were most marked, but were no greater than in other cases in which the latter were slight. Gastro-intestinal disorders were present in every case in which data were obtained. Syphilis was present in two cases. In six cases the liver was enlarged. In general the largest livers were associated with the largest spleens, but in three cases in which the spleen reached the anterior superior spine the liver was not enlarged. There was general enlargement of the lymphatic glands in every case in which their condition was noted. The greatest enlargement was found in cases in which the spleen was much enlarged, but the glands were only slightly enlarged in three out of the four cases of the largest spleens. The number of erythrocytes bore no constant relation to the size of the spleen. In the two cases in which the number was lowest the splenic enlargement was slight; the highest number (5,800,000) occurred in a case in which the spleen reached to the umbilicus. In five cases there were over 5,000,000 per cubic millimetre and in five others there were over 4,000,000. There was no evident relation between the number of erythrocytes and the size of the liver. The diminution in the amount of hæmoglobin was always relatively greater than that in the number of the corpuscles. However, the hæmoglobin is always relatively low in infancy and a relatively great diminution of its amount is characteristic of the anæmias of that period. There was no leucocytosis in eight cases and four of these were among those in which the spleen was largest. The greatest leucocytosis occurred in a case in which the spleen reached to the umbilicus but in another case in which the spleen reached to the umbilicus there were only 8200 leucocytes. Thus there was no constant relation between the number of leucocytes and the size of the spleen. Similarly there was no constant relation between the size of the lymphatic glands and the number of leucocytes. Dr. Morse concludes that when anæmia, splenic tumour, and enlargement of the liver or lymphatic glands are found associated in infancy they are in no way dependent on each other but the results of a common cause—disturbed nutrition; that the anæmia is secondary; and that there is no justification for placing the cases of anæmia in infancy associated with enlargement of the spleen or liver in a separate class and calling them "splenic anæmia of infancy." Of the 22 cases seven were known to be fatal. In one case death resulted from meningitis. In the six other cases there were no complications; in all of these the blood changes were marked; the spleens were very large in three but comparatively small in the others. Nucleated red corpuscles and megaloblasts were numerous in five and two cases respectively which terminated in recovery, hence these forms of cell are not of so much prognostic importance in infancy as in later life. The prognosis depends more on the condition of the blood than on the size of the spleen. The largest spleen may return to the normal size in a few months.

THE DIAGNOSTIC VALUE AND SIGNIFICANCE OF BABINSKI'S GREAT-TOE REFLEX.

MUCH excellent and valuable work has been done during the past three years in regard to the important sign known as Babinski's great-toe reflex, the frequency of its occurrence, and its diagnostic value in the differentiation of organic and functional nervous affections. Three years ago a leading article on this subject was published in THE LANCET[1] based on the work of Babinski and Collier. Dr. G. Marinesco has published in the *Archives de Neurologie* for June a full summary of his observations on 191 persons—viz., 130 cases of organic disease of the central nervous system, 45 normal adults, and 16 newly born infants—the observations being made carefully and repeatedly in each case so as to obtain trustworthy results. In 100 cases of organic hemiplegia of cerebral origin the Babinski reflex was seen 86 times. 31 cases of paraplegia resulting from various causes were also examined. They included 15 cases of Pott's disease of the spine, four each of traumatism of the spinal cord and syphilitic myelitis, two each of pellagra with and without tabes dorsalis, two of sarcoma of the spinal meninges, and one each of amyotrophic lateral sclerosis and cancer of the vertebral column. Babinski's sign was absent in three of the four traumatic cases and in the one case of cancer of the vertebral column but was present in the remaining 23 out of the 31 cases of paraplegia. In 45 normal individuals the Babinski reflex was altogether absent. Among 16 newly born children it was observed only in a single case. It is the rule, however, adds Dr. Marinesco, if the infant is asleep, to elicit, by plantar stimulation, extension of the toes and especially of the great toe. Hence the diagnostic value of Babinski's reflex in infants lies only in the fact that it is (or is not) obtainable when the child is awake. In progressive compression of the spinal cord the tendon reflexes and ankle clonus are apt to disappear while the Babinski reflex still persists. Dr. Marinesco also adds the interesting observation that in recent hemiplegia the Babinski reflex makes its appearance very shortly after the hemiplegic "stroke," whereas the exaggeration of the knee-jerk, which is due to descending degeneration of the pyramidal tracts, makes its appearance somewhat later. Under chloroform narcosis a Babinski reflex already existent disappears, whereas an exaggerated knee-jerk or an ankle clonus co-existent with the Babinski reflex before anæsthesia still persists when the anæsthesia is complete. The Babinski reflex is thus a sign of greater delicacy and value for purposes of differential diagnosis than are the other symptoms mentioned. Occasionally anomalous reactions of the great toe were met with in chloroform narcosis. The collected observations of Dr. Marinesco lead him to the conclusion that the Babinski reflex is dependent upon a disturbance of function of the pyramidal tracts short of, and not necessarily equivalent to, actual descending degeneration of those tracts.

THE DISTRIBUTION OF PLAGUE.

As regards Cape Colony the acting medical officer of health states that for the week ending May 30th the condition of the various places mentioned below was as follows:—At the quarantine station, Saldanha Bay, 2 Asiatic males remained under treatment in the hospital, both being convalescent. At Port Elizabeth 5 cases of plague were discovered during the week—namely, 1 European male and 1 coloured female on May 24th, 1 coloured male on the 26th, 1 Indian male (found dead) on the 28th, and 1 native male on the 30th. At the Plague Hospital 1 coloured female and 1 native male were discharged recovered during the week, leaving 12 cases under treatment. Plague-infected rats continued to be found in the town. At East London 2 cases of plague were discovered during the week—namely, 1 native male on May 24th and 1 native male (found dead) on the 26th. At the Plague Hospital 6 cases remained under treatment. At King William's Town 5 cases of plague were discovered during the week—namely, 2 European males and one European female on May 24th, 1 native male (found dead near Berlin) on the 29th, and 1 European male on the 30th. At the Plague Hospital 1 Indian male was discharged recovered, leaving 9 cases under treatment. Plague-infected rats continued to be found in the town. Neither at Graaff-Reinet nor at Burghersdorp were there any cases of plague or of plague-infected rats, but the latter continued to be found on the railway premises at Queenstown. As regards Hong-Kong a telegram from Sir Henry A. Blake received at the Colonial Office on June 17th announces 120 cases of plague, 12 of the sufferers being Europeans. 78 deaths occurred from plague during the week ending June 13th. As regards the Mauritius a telegram from the Governor received at the Colonial Office on June 19th states that for the week ending June 18th there were 2 fatal cases of plague.

THE LIMITATIONS OF THE PUBLIC HEALTH ACTS.

IN a leading article in THE LANCET of June 20th, p 1751, we dealt with a case illustrating the difficulties which sanitary authorities have to contend with in the performance of their duties. Two further instances have just occurred which serve to strengthen the demand for more ample legal powers. The first is supplied by the result of the appeal in the case of the Consett Urban District Council *v.* Crawford. In this case a number of members of the council and their officers, while making a tour of inspection of their district, were some of them locked in, and others of them locked out of, a yard by the person whose premises they were examining with a view of learning whether a certain nuisance had been discontinued. Proceedings were therefore taken against the obstructor under Section 306 of the Public Health Act, 1875, but without success and the Court of Appeal upheld the refusal of the magistrates to convict on the ground that the representatives of the council were trespassers. The second case involves a somewhat different point. At the Worship-street court the Finsbury borough council summoned a person named Macey for not having cleared a house let in lodgings in accordance with the by-law relating to such matters. The house was registered under Section 94 of the Public Health (London) Act, 1891, which enacts that "every sanitary authority shall make and enforce such by-laws as are requisite for," among other things, "the cleansing and lime-washing at stated times of the premises," and under this section by-laws in the form approved by the Local Government Board had been made requiring such cleansing to be done in the month of April. Mr. Mead, however, held that the by-law was unreasonable and therefore bad and invalid and he dismissed the summons with costs. His attitude appears to have been determined by the consideration that there are many houses of the class here referred to in Finsbury and that there might consequently be difficulty in getting workmen to carry out the necessary operations. If there be sufficient foundation for this opinion the responsibility lies upon the Local Government Board which may perhaps be persuaded to change its wooden "model" by-law for one with effective machinery.

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[1] THE LANCET, Sept. 9th, 1899, p. 727.

CANCER OF THE RECTUM AS A COMPLICATION OF PREGNANCY.

THE *Scottish Medical and Surgical Journal* for June contains an important paper by Dr. A. W. Russell on the rare condition of pregnancy complicated by cancer of the rectum. Only about 20 cases appear to have been recorded. Probably the reason of the infrequency is that the period of liability to cancer is later than that of child-bearing. Dr. Russell relates the following case. A woman, aged 27 years, was in her sixth pregnancy. In the second month she complained of slight hæmorrhage and pain on defecation. A "constricting band" was felt in the rectum about two and a half inches from the anus. Two and a half months later the pain and hæmorrhage had increased, the rectum was narrower, and the motions were ribbon-like. A month later Dr. Russell saw her for the first time in consultation. Under anæsthesia a dense mass was felt surrounding the rectum for more than two inches from the anus and so encroaching on the lumen that only a finger could be passed with difficulty. As the chances of the pregnancy reaching the time for Cæsarean section were very small there was little reason to consider the prognosis of operation with regard to the child. Mr. R H. Parry agreed to perform abdominal hysterectomy with a view to relieve pelvic congestion, to avoid further risks, and to inspect the pelvis so as to decide as to the possibility of removing the diseased rectum. The cervix was found to be fully dilated and the membranes to be bulging, showing the imminence of abortion. The posterior vaginal wall was so invaded that the least tension would have torn the cancerous mass. After draining off the liquor amnii Mr. Parry opened the abdomen and removed the uterus. As the broad ligaments and other pelvic structures were invaded he did not attempt to remove the growth but performed left inguinal colotomy. Good recovery followed and within a fortnight the pain was so diminished that the customary dose of morphia was discontinued. From a study of the recorded cases Dr. Russell draws the following conclusions. 1. If cancer of the rectum is discovered early in pregnancy immediate radical operation should be considered 2. In advanced pregnancy with a small circumscribed growth the uterus should be emptied before attempting removal of the growth. 3. In advanced pregnancy with a viable child Cæsarean section and hysterectomy should be performed and, if possible, inguinal colotomy should follow and the diseased rectum should be detached from above so as to allow the operation to be easily completed by the vagina according to the method of Rehn or Liermann. 4. When, on the other hand, the disease is beyond radical treatment the child should be saved by Cæsarean section or hysterectomy with or without colotomy as may be necessary. 5. If the child is dead and the cancer is beyond operation Cæsarean section is still likely to be needed unless labour can be accomplished easily and without undue crushing or laceration by the aid of perforation, embryotomy, or version. 6. With modern improvements in methods of operation better results may be expected than those of allowing labour to take place or inducing it through the natural passages.

CHYLOUS ASCITES.

THE very existence of chylous ascites—that is, the presence of chyle in the peritoneal cavity—has been called in question, but there can be no doubt that the condition, though rare, does exist. Guinochet made some observations on a case in which the ascitic fluid apparently contained chyle. The composition of the fluid was determined by analysis when the patient was on ordinary diet, and then the diet was altered to milk with butter beaten up with it. The fluid was again examined and an increase in the amount of fat was observed, and, moreover, butyrine was found to be present, and as butyrine is not a constituent of normal human fat it may be taken that the fat in the ascitic fluid in this case was derived from a lacteal. Chylous ascites appears to occur from blocking of the thoracic duct, though it has been found after trauma of this vessel. The duct is blocked in two ways; most commonly it is compressed by a malignant growth of the stomach or pancreas, or posterior mediastinum, but a few cases have been recorded in which the obstruction has been at the opening of the thoracic duct at the junction of the left subclavian and internal jugular veins. The abdominal lymphatics become distended and one or more give way, allowing the chyle to escape into the abdominal cavity. As might be expected, when the point of obstruction is high up chyle has also been found in the left pleural cavity, because the left half of the thorax drains into the thoracic duct, while the right half is drained by the right thoracic tract. In the diagnosis of chylous ascites one possible error has to be guarded against. Ascitic fluid may be milky in appearance and yet there may be no admixture of chyle, for a breaking-down carcinoma of the peritoneum may make the fluid milky. Still, as abdominal carcinoma is the commonest cause of true chylous ascites, a microscopic and chemical examination is necessary before the diagnosis can be considered certain. In THE LANCET of June 20th, p. 1740, we published an account of a case of this rare condition which was under the care of Mr. A. H. Burgess of Manchester

URINARY CHANGES AFTER INJURIES TO THE HEAD.

IN an interesting communication to the *Monatsschrift fur Unfallheilkunde und Invalidenwesen*, 1902, Heft 12, Dr Borchard discusses the occurrence of glycosuria, albuminuria, and cylindruria after severe injuries to the head. He investigated the condition of the urine in a number of cases as soon as possible after the injury and found noteworthy changes in two of them which he records. The first case was that of a young labourer, aged 17 years, who fell from the second storey of a building and sustained a fracture of the base of the skull. One and a half hours after the injury the urine was found to contain 1·2 per cent. of albumin, 1·5 per cent. of sugar, numerous red blood corpuscles, and casts. These conditions gradually disappeared and the patient recovered completely, and on testing him for alimentary glycosuria a year later a negative result was obtained. The second case was that of a young man, aged 20 years, who sustained a fracture of the base of his skull from a falling scaffold pole. On his arrival in an unconscious condition at hospital six hours after the injury, his urine contained traces of albumin, 1⅔ per cent. of sugar, but no blood or casts, though granular casts appeared shortly after. The patient died 27½ hours after the injury and at the necropsy no changes in the medulla oblongata were found either on macroscopic or microscopic examination, but there were two small areas of softening in the apex of the temporal lobe and a few small hæmorrhages in the cortex. There was slight cloudiness of the cortical and medullary substance of the kidney. Dr. Borchard further gives a summary of the literature of the subject. According to Higgins and Ogden glycosuria occurs in 9·43 per cent. of injuries to the head and is usually complicated by albuminuria This condition gradually gets less marked and eventually completely disappears in most cases. An alimentary glycosuria or a true diabetes may follow the injury to the head in a certain number of cases and may persist in a few of them, while the occurrence of diabetes insipidus after such injuries is well known. Dr. Borchard attributes the urinary changes to disturbances induced in the circulatory apparatus of the kidney by the cerebral injury, but states that an actual lesion in the region of the fourth ventricle is not an essential in their production.

THE next competition for the Howard Medal of the Royal Statistical Society (1903-04) will take place in the ensuing session. The essays must be sent in on or before June 30th, 1904. In addition to the medal a grant of £20 will be awarded to the writer who may be the successful competitor. The subject is—"The Effect, as shown by Statistics, of British Statutory Regulations directed to the Improvement of the Hygienic Conditions of Industrial Occupations." Any necessary explanations may be obtained at the office of the society, 9, Adelphi-terrace. Strand, London, W.C., by application to the secretary of the society, Mr. Benedict W. Ginsburg.

THE Pathological Society of London will meet at Oxford in the Pathological Laboratory, South Parks-road, on Saturday, July 4th, from 4 to 6 P.M. There is a train from Paddington to Oxford at 1.45 P.M. Dinner will be provided at 6 45 at Magdalen College. Members who propose to dine are requested to give notice to the Regius Professor of Medicine, Oxford, before July 1st. The price of the dinner tickets, including wine, is 7*s*. 6*d*. The return train to London leaves at 9 20 P.M. Communications will be made by Dr. Beddard, Dr. Pembrey, Dr. Spriggs, Dr. Dreyer (Copenhagen), Dr. Haldane, Dr. Ritchie, and Dr. Muir.

THE governors and medical staff of Guy's Hospital are sending out invitations for a garden party to be held at the hospital on Friday, July 3rd, at 3 P M. The laboratories and museums, the College, the Henriette Raphael Nurses' Home, and the wards will be open until 5 30 P.M. The Wills' Library will be declared open by Sir Frederick Wills, M.P., who will also distribute the medals and prizes gained by the successful students of the year. The guests are invited to join with the governors, the members of the staff, and the students in assuming academic costume.

A *matinée* in aid of the building fund of the Queen Alexandra Sanatorium, Davos, was given on June 22nd, at His Majesty's Theatre, London, by permission of Mr. Beerbohm Tree The theatre was very crowded. Many distinguished people generously paid enormously enhanced prices for seats and the entertainment, which was well received, resulted in the realisation of the large sum of over £5000, which must be highly gratifying to all concerned.

THE Congress of the Royal Institute of Public Health will be held at Liverpool from July 15th to 21st inclusive, under the Presidency of the Right Hon. the Earl of Derby. The business of the Congress is divided into seven sections and the honorary general secretary is Dr. E W. Hope, Municipal Offices, Liverpool, to whom all inquiries should be addressed.

AT a meeting of the Obstetrical Society of London to be held at 20, Hanover-square, W., on Wednesday, July 1st, a discussion on Ophthalmia Neonatorum will be opened by Mr. Sydney Stephenson, introduced by Dr. W. S. A. Griffith. The honorary secretaries will be glad to hear from any who, not being Fellows of the society, desire to take part in the discussion.

WE regret to record the death of Miss Isobel S. Bryson, M.B., assistant medical officer of Camberwell Infirmary, who died at Camberwell from acute blood poisoning following upon a wound made during a post-mortem examination. Miss Bryson graduated in medicine at the University of London in 1900.

THE first honorary degrees granted by the University of London were conferred on Wednesday last—"Presentation Day"—by Lord Rosebery, as Chancellor, upon the Prince of Wales, the Princess of Wales, Lord Kelvin, and Lord Lister.

A CONVERSAZIONE will be held at King's College, Strand, London, W.C., on Wednesday, July 1st, from 9 to 11.30 P.M., preceded by a distribution of prizes at 8 P.M. by Sir William Anson, M.P., Warden of All Souls, Oxford.

THE Duke of Fife, the Lord-Lieutenant of the county of London, accompanied by Her Royal Highness Princess Louise, Duchess of Fife, will open the Epileptic Colony at Ewell on Wednesday next, July 1st.

THE annual prize-giving at the London School of Medicine for Women will take place on Friday, July 3rd. The Hon. Sir John A. Cockburn, M.D. Lond., K.C.M.G., will present the prizes.

AT the annual meeting of the Röntgen Society to be held at 20, Hanover-square, on Thursday next, Lord Blythswood will be proposed as President.

THE MALARIAL SEASON OF 1902 IN ITALY.

THE fourth volume of the Transactions of the Society for the Study of Malaria[1] has just been issued. It consists of a series of 39 papers by different members of the society, most of which take the form of reports of epidemics in various parts of Italy or of experimental work undertaken by the society along the lines of railway. One article by Dr. Schoo gives an account of malaria in Holland in 1902. Four of the papers are devoted more particularly to mosquitoes or their larvæ, one to an account of a search after hæmolysin and globulin in malarial blood, and two to the question of the absorption and elimination of quinine. A review by Professor Celli of the work done in regard especially to the epidemiology and prophylaxis of malaria concludes the volume which is further furnished with 13 maps of different malarious towns and districts described in the reports.

At the meeting of the society held on June 4th Professor Celli, by whom the report was presented, gave the following brief summary of the results obtained by the various workers during the past season.

1. *The epidemiology of malaria.*—The malarial season of 1902 was, on the whole, even milder than that of the preceding year, but there were not wanting, as in 1901, several

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[1] Atti della Società per gli Studi della Malaria, vol. iv., Roma, 1903.

as yet unexplainable exceptions to the general mildness of the epidemics. Taken as a whole, however, the epidemiological researches of the past year confirmed in many respects previous observations in reference to the geographical distribution of the various malarial parasites, to the different epidemic types in the various parts of Italy, and to the course of the several epidemics of benign tertian, malignant tertian, and quartan fever respectively. They also emphasised many doubts which still required to be cleared up. For example, despite all their efforts they still lacked a sure and ready means of diagnosing latent malaria so as to differentiate clearly primary infections from relapses. And there also remained to be more thoroughly elucidated the subject of relapse itself—that fundamental characteristic of malarial fevers—in connexion with the causes which favoured it, to which, besides those already recognised—namely, over-fatigue and rheumatic influences—must now be added deficiency of nourishment on account of which the patient was unable to throw off the disease, and certain morbific agencies such as inoculation by tubercle which might light up afresh a latent malarial fever. It appeared, too, that true epidemics of relapses might develop anywhere during the fever season, giving a benign character to the epidemic in years of mild malaria. In its turn the pre-epidemic recrudescence of relapses was always very evident in benign tertian and quartan, but it was not wanting even in malignant tertian although sometimes, as in Latium, it preceded by only a short interval, or, indeed, almost accompanied, the commencement of the epidemic, perhaps because then also began the season most favourable to the development of the corresponding hæmosporidia in the stomach of the mosquito and also because the period of incubation of that fever was the shortest. The combination of relapses with primary infections gave the different well-known epidemic types as they were met with between the north of Europe and the south of Italy, each type receiving its character chiefly from the predominance of some particular species of parasite. In Italy, however, the course of each of the three epidemics of benign tertian, malignant tertian, and quartan was substantially the same in the different parts of the country. It was also necessary that paludism and the occurrence of the anopheles should be studied more closely and that their relations should be determined with the presence, the disappearance, the spontaneous diminution, the intermittency, and the recrudescence of malaria—in short, with all its autochthonous variations. These were so many biological problems bearing upon epidemiology which still awaited solution. Further, the mutual relations between agriculture and malaria had been investigated during 1902. For example, it was noticed that the connexion between ricefields and malaria was not always and everywhere the same, for whilst the opening of new ricefields was always accompanied by a great extension and increased intensity of malaria the cultivation of the rice, on the other hand, did not interfere with the diminution or even with the disappearance of the epidemic, just as it never interfered with its periodical annual oscillations. Likewise it had now been definitely ascertained that the maceration of hemp and of flax was inimical to the life of the larvæ of anopheles. Finally, it was necessary to define still more clearly the relations between meteorology and malaria, especially between the temperature and the development of the various hæmosporidia in the stomach of the mosquito and between the temperature and the course of the several epidemics of mild tertian, malignant tertian, and quartan respectively. Meanwhile it might be affirmed that these relations could neither be identical nor uniform for the three parasitic species and for the three corresponding epidemics of malaria. In conclusion, there were several epidemiological problems (not, however, affecting the new etiological theory of malaria) upon the solution of which the experience of the past year had thrown no light and which must remain for future investigation.

2. *The prophylaxis of malaria.*—Upon this subject the results obtained were more decisive and more harmonious than those which had been elicited in regard to the epidemiology. First of all, it had been proved experimentally that the absorption of quinine introduced by the mouth in the form of tablets such as those supplied by the Italian Government was effected quite as rapidly and efficaciously as happened when the drug was administered in the form of powder or in solution. It was further demonstrated that the daily exhibition of small doses (from 25 to 50 centigrammes) had the effect of causing an accumulation of the alkaloid in the blood, at the same time obviating rather than producing the phenomena of cinchonism. Again, the clinical observations of all the members who studied the question coincided with experimental results in confirming the therapeutic efficacy of quinine in tablets and in throwing into relief the marvellous power of quinine as an antidote and the absence of any inconvenience attending its administration even when continued for months in generous doses. There was perhaps no other example in pharmacology of an antidote so perfect—that is to say, of one the action of which was so rapidly established and could be so long continued as that of quinine. In addition to this its administration could be interrupted, whenever desired, without any disturbance, whilst the curative effects of larger doses did not suffer any diminution on account of the system being habituated to the smaller ones. This mithridatic property, however, was fully displayed only when the quinine was administered daily, or at most at intervals not greater than three days. Intolerance of the drug was limited to a few individuals. The contributors to the report were unanimous in affirming that there was no better specific against malarial infection, whether preventive or curative, than quinine. Arsenic and iron had no direct curative action in malaria; they might, indeed, have an indirect effect, but whether they were really successful as an adjunct to quinine in preventing relapses could not yet be definitely stated, whereas it was very certain that good nourishment was more effectual than arsenic and iron in the radical cure of latent malaria and in warding off, as far as was possible, the occurrence of relapses. To succeed in this last aim the secret was to give quinine with the utmost assiduity and to continue to give it for a long time after the febrile attacks had been cut short. And if, in spite of the treatment by quinine skilfully administered and if sometimes after intervals of perfect health there should be a return of fever, they must still have recourse to quinine as the most trustworthy remedy. Owing to the resistance of the relapses to quinine it was found, as might be expected, that no notable diminution of the epidemic of malaria followed its use, even in large doses, for the pre-epidemic curative treatment of patients who were actually malarious or about to become so. Fortunately, its prophylactic action was much more ready and efficacious. In doses of two grammes (30 grains) per week for an adult (one half the quantity for children) administered by the continuous or daily method (from 20 to 40 centigrammes per day), or even by the interrupted or weekly method (one gramme per day on Saturday and Sunday), they would certainly succeed in reducing to a minimum the new cases—i.e., those with primary infection—and also in diminishing greatly the number of relapses which were prone to continue to recur with such obstinacy. Of a total of 3055 persons thus prophylactically treated in 1902 only 235, or 7·7 per cent., were affected with primary fevers or with relapses. With a mixed prophylactic treatment by means of quinine, arsenic, and iron, the effects were less successful than with quinine alone, the percentage of attacked under this method being from 14 to 20, whilst with arsenic and iron alone the results were absolutely negative. Thus in any anti-malarial campaign there was *only one* remedy which they could not do without, and that was quinine. It was high time that every medical man in Italy understood this and learned to appreciate the value of the very powerful weapon for combating malaria which was put into his hands by the law for the gratuitous supply of quinine for the benefit of all the working people in malarious localities. The physician should therefore understand thoroughly how to make use of this truly sovereign remedy and accordingly now that the law placed completely at his disposal a supply of quinine for the poor he should leave off the old method of treating the febrile attacks only with a few doses barely sufficient to cut them short and should adopt instead the following rules: (*a*) When other prophylactic measures could not be counted upon it was necessary to give a *preventive* course of quinine to the healthy as well as to those who might have a latent infection. The distribution of quinine on a large scale by the day or by the week was easily effected when saccharated tablets were employed. The cost was trifling—namely, from two to three lire (*1s. 8d. to 2s. 6d.*) a head for a whole season of four months. The quantity of quinine required per head for the whole preventive campaign was less than was often required for cutting short definitely a fever once contracted. (*b*) In the case of those very few individuals who, in spite of

the preventive treatment, contracted fever it was necessary to cut short the attacks with therapeutic doses and to continue these large doses for a long time (from two to four weeks) before recommencing the preventive treatment as before. (c) In the case of those patients who, in spite of the preventive treatment, continued obstinately to get relapses the administration of therapeutic doses (from half a gramme to one gramme) must be prolonged for a long time (from four to six weeks), and so soon as it seemed desirable the tonic remedies arsenic and iron should be added. Thus, from one year to another the sad inheritance of the infected would continue to diminish and with perseverance they might succeed in greatly reducing, and in time in almost wholly annulling, the tribute which the rural population was paying to malaria. It was for medical men to attempt this on a large scale, beginning with a part of the population. The beneficial effects which would accrue would prove the best stimulus for the future to the rest of the population in teaching and persuading them by the eloquence of facts how under the guidance of the medical profession and with the help of their own efforts they could, without expense and with almost no inconvenience, easily preserve their health during the months when, and in the places where, formerly people sickened and died from malaria. For those who were not obliged to work in the open air during the most dangerous hours (dawn, sunset, and night) and who possessed a house or shelter to protect them from the attacks of the pestilent mosquitoes, there was also the system of mechanical prophylaxis, which both in Holland and in Italy continued during 1902 to yield the most brilliant results. It would suffice to quote a few statistics to demonstrate this. The railway company which in 1901 applied the system over 573 kilometres of the most pestiferous parts of their lines, benefiting 4138 persons, extended it in 1902 to about 750 kilometres to the benefit of 5600 persons, among whom in consequence malaria, instead of being the rule as formerly, had now become the exception. The Direction-General of Customs which in 1901 as an experiment protected 20 barracks of its officials against mosquitoes in 1902 protected similarly 72 barracks. The results had been so good that both the administration of the railways and that of the customs had still further extended this system of prophylaxis. For various reasons, however, it was little suited for the circumstances of the peasants, for whom the prophylaxis by quinine was best adapted, but this did not alter the fact that wherever there was a house or shelter which could be protected against the entrance of mosquitoes there malaria ceased to be a domestic epidemic. In fact, amongst a total of 5851 persons to whom they could point as having enjoyed in 1902 the great privilege of this mechanical prophylaxis, there occurred in all only 2·8 per cent. of new or primary infections and only 10·1 per cent. of relapses. The method of prophylaxis by the destruction of the mosquito could not yet succeed in the battle with nature, which provided so prodigally for the reproduction of that insect; it could therefore have nothing more than a local and very limited application. A study had also been made of the place which the new theory of malaria took in relation to the great works for the improvement of the land according to the various systems carried out in different parts of Italy. It was ascertained that every drainage system exercised a distinctly deterrent effect upon mosquito life over the improved area, but the deficiency or neglect of small complementary drainage operations and the want of proper care of the drainage canals often neutralised the effects of the best of these systems. Fortunately even when the drainage itself did not succeed in wholly extirpating the anopheles it was always the first step towards the hygienic improvement of an extensive territory, the second step being the cultivation of the ground without which the expense and labour of drainage were all thrown away.

With the prophylactic measures above mentioned at their disposal they were now in a position to protect both the labourers engaged on the drainage works and the agricultural colonies on the improved areas. To this end the special sanitary legislation against malaria should serve admirably. After the first law of Dec. 23rd, 1900, for the State control of quinine, there was enacted another on Nov. 2nd, 1901, by which quinine might be supplied by the district surgeon gratuitously and plentifully to all labourers and peasants in malarious places at the expense of their employers; and all labourers who depended directly or indirectly upon the State were granted the right of having their habitations protected against malaria at Government expense. All the observations made by their associates in 1902 served to show upon what a solid scientific and experimental basis the laws against malaria had been founded. They might therefore congratulate themselves that, all obstacles having been finally overcome and the malarious zones in many communes of the kingdom having already been marked off, these two beneficent laws will begin during the approaching fever season to render those inestimable benefits which had always been observed to follow them wherever in experimental and mission stations they had been able to apply them. It was now their duty to see that those laws, which had issued through the efforts of the Society for the Study of Malaria, were properly applied. Meanwhile, with the object of educating the people upon the question, 4000 copies of a pamphlet explaining and making known the anti-malarial legislation had [illegible], whilst another pampl[illegible]llations against malaria [illegible]

After having [illegible] society during 1902 in presenting the fourth volume of its studies with its 39 original memoirs richly illustrated Professor Celli concluded his relation with a simple statement of fact—viz., that the whole of that important work was represented in the balance sheet by the small sum of 11,384 lire (£455).

THE ROYAL SOCIETY'S (SECOND) CONVERSAZIONE.

THE second conversazione of the Royal Society was held on June 19th, when, as is usual, ladies graced the occasion, while to some extent the exhibits shown at the first meeting, which was held on May 15th, were repeated. Thus, Sir William Crookes once more demonstrated the properties of the emanations of radium, Dr. W. J. Russell his photographs of dust deposits, Professor F. T. Trouton, F.R.S., his hydrometer and viscosimeter, Sir Oliver Lodge his new coherer, and so forth.

There were, however, some additional exhibits of considerable interest. Mr. Henry Crookes, for example, showed plate cultures of several kinds of bacteria which had been [illegible] h a mica screen. The [illegible] the "electrons" from [illegible] at the organisms were killed in those places where they had been exposed to the action of only ten milligrammes of bromide of radium. On incubation a bare space which was free from bacterial growth was left on the plate opposite the point where the radium had been placed. The organisms so exposed were the bacillus liquifaciens, the bacillus coli communis, and the bacillus prodigiosus. Dr. W. Ramsden showed some very pretty experiments bearing upon the behaviour of surface membranes, bubbles, and emulsions. The experiments shown were intended to illustrate a theory that the persistence of bubbles and emulsions is due mainly to the separation of solid or highly viscous matter at the surfaces concerned. A magnetised needle floating freely on the surface of plain water takes up a north and south position and is at once deflected by another magnet. A similar needle if floated on the surface of a very weak solution of saponine stays in any position and is not deflected by a magnet. That this is due to surface tension only is shown by the fact that if the needle be immersed in the saponine solution it sets north and south and is easily deflected. Moreover, if the needle be floated on saponine solution and the vessel containing it be suspended by a fine piece of gut, so that it be free to move on approaching a magnet the whole system, needle, vessel, and contained fluid twist as if one homogeneous magnetic solid. A bubble of oil if "blown" in saponine solution by means of a current of more saponine solution remains as a spherical bubble. If the saponine solution inside the bubble be withdrawn the oil film slowly contracts, exactly like a soap bubble or an India-rubber film stretched by water and also the film takes the shape of a drop of water, only upside down. Mr. John W. Warman exhibited a model representing the hydraulic organ of the ancients. This instrument was originally invented by Archimedes and the feature of its construction is that the wind pressure is derived from the weight of an annular mass of water instead of from a heavy weight placed on the folded air-bellows as in the case of the modern "pneumatic" organ. A new instrument known as a "turbidimeter" for determining the turbidity of water was shown in accordance with the ingenious design of Mr. C. Anthony. The instrument consists of two parallel tubes, one containing the water to be examined and the other a Nichol prism. The eye-piece contains another Nichol prism. By rotating the eye-piece the illumination of the one field can be varied until it matches the field receiving the light through the standard thickness of water under examination. This apparatus, it seems to us, should be very valuable in the examination of public water-supplies. Professor E. Rutherford and Mr. F. Soddy showed that the radio-active emanations of radium and thorium can be condensed by means of liquid air, volatilisation taking place, however, as soon as the temperature rises. Their actual quantity is infinitesimally small; they are invisible and unweighable but their presence can be detected by the property of radio-activity. Professor J. Sollas, F.R.S., showed an ingenious method for determining the specific gravity of blood, using only a single drop for the purpose. A fluid heavier and another lighter than blood are introduced through a tube, the heavier first, so that the lighter fluid added subsequently floats upon it. Both fluids consist of a mixture of chloroform and benzine; the specific gravity of the heavier fluid is 1·07 and that of the lighter is 1·04. The two fluids mix by diffusion, a column being obtained in which the specific gravity varies continuously. A drop of blood obtained from a pin prick is then added and this sinks in the column till it reaches a level where the specific gravity is identical with its own. By means of glass floats the specific gravity of the drop of blood may be indicated. An interesting illustration of the way in which gun accidents may arise was given by Mr. J. Y. Buchanan, who showed in the first place the effect which was produced by the momentary relief of great pressure upon spheres at great depths under the sea, pointing out that the collapse of the brass tube in the peculiar circumstances of one experiment is the exact counterpart of a mistake unintentionally made by people out shooting, especially in winter. If the muzzle of the gun becomes stopped with a plug of even the lightest snow the gun invariably bursts. Light as the plug of snow is, it requires a definite time for a finite pressure, however great, to expel it. During this short time the tension of the gases liberated from the powder is so great that the barrel is unable to withstand it and bursts. The Cooper-Hewitt mercury vapour lamp attracted very general interest. The light derived from the electric discharges through mercury vapour is entirely devoid of red rays and the eye sustains little fatigue under this form of illumination. Mr. J. Mackenzie Davidson showed a new stereoscopic fluoroscope which beautifully portrays objects in relief in the path of the x rays.

In the meeting room lantern demonstrations were given by Professor E. D. Poulton, F.R.S., and by the Bioscope Company.

MEDICINE AND THE LAW.

Parents and Medical Aid.

THERE are two more or less well-known religious sects in England the members of which profess not to consider it right to obtain medical aid or to apply anything in the nature of scientific remedies when they are ill, and from time to time cases occur in which death and the question of certification call attention to tenets which, to ordinary persons, appear to be extremely foolish as well as dangerous to human life. No adult can be compelled by law to avail himself of the services of a physician or surgeon and consequently it is only when children die that the question arises whether those having the custody of them should be punished. A number of cases have been tried during the past 50 years in which members of the sect known as the Peculiar People have been charged with manslaughter and other offences according to the facts proveable against them, with various results. At one time an Act of Parliament (31 & 32 Vict., Cap. 122, Sec. 37) made it an offence punishable on summary conviction to neglect to provide adequate medical aid for a child whereby his health should be, or should be likely to be, seriously injured and it was held that in a case where death ensued upon such neglect a conviction for manslaughter might take place. The section in question has for some time been repealed and in its place the Prevention of Cruelty to Children Act of 1894 makes it a misdemeanour for any person who has the custody, charge, or care of any child wilfully to neglect such child in a manner likely to cause such child injury to his health, and in a case argued before the Court for the consideration of Crown Cases Reserved the wilful omission to provide medical aid for a child has been held to be neglect within the meaning of this Act, so that on death occurring through such omission the parent or other responsible person may be charged with manslaughter. Persons so charged have sometimes been convicted and sometimes have been acquitted. It is not easy to obtain a conviction, which must to a large extent rest upon medical evidence. A medical witness in such a case has usually not seen the deceased during the progress of the illness or at any time before death, and unless he is prepared to state positively that the neglect to provide medical aid shortened the life of the deceased there is no evidence of manslaughter. Even if a conviction for this serious offence takes place a very light penalty is imposed owing to a natural desire of the judge to be lenient towards misguided persons acting under the influence of honestly held religious beliefs. Punishments thus inflicted have no deterrent effect. The same parents have been known to let child after child die in similar circumstances of neglect and even though the deaths may not be numerous, because the Peculiar People are few, still the fact remains that these preventable deaths take place, while other children suffer unnecessary pain, and to these, if they do not die, no attention as a rule is called. At the present moment there are parents awaiting trial who, according to the evidence laid before the magistrate, did not call in a medical man when their child to their knowledge was suffering from diphtheria. No comment can of course be made on this particular case, in which the charge is not one of manslaughter but of neglect so as to cause unnecessary suffering. The question, however, may well be ventilated apart from any particular instance whether some special means ought not to be provided by law for the compulsory rescue of the sick children of parents whose religious views are opposed to medical interference. Such rescue or removal need not last beyond the child's restoration to health and would be in accordance with the principle that prevention is better than the punitive measures which fail to provide a remedy. It is not at all certain that parents holding views of the nature indicated would regard it as a hardship or as a martyrdom even of the mildest kind that medical aid should be applied to their children by others under the authority of the law. The Peculiar People hold that they would commit sin by acting voluntarily as if they doubted the passage in the Bible responsible for their conduct (St. James v. 14). It has never, however, been shown that their tenets go beyond this or that they would dream of resisting acts which would be done by others without implicating them and without any connivance on their part. Two sects have been mentioned above; the second, known as Christian Scientists, is of a different character. The Peculiar People, founded in 1838 by two men named Bridges and Banyard, have never increased to any considerable extent and are drawn from the humbler classes in London and its neighbourhood, especially in Kent and Essex. The Christian Scientists, whose non-employment of medical aid is apparently based upon denial of the existence of anything so material as disease and death, are of more recent origin, occupy quite a different social position, and are said to be numerous not only in London but also in the provinces. The Christian Scientist, however, does not seem hitherto to have ventured to test the efficacy of the Prevention of Cruelty to Children Act by allowing his children to die without medical aid or else no instance of his doing so has attracted attention in this country. Possibly his faith is of a less established character than that of the Peculiar People or he may think that a judge would not be inclined to treat an educated man as he would a fanatic with less opportunity for the development of his intelligence. In the United States of America, however, the deaths of the children of Christian Scientists without medical aid being sought are not unknown and they may occur at any time in our own country. The matter is not an easy one to deal with as there would be no certainty that the illness of a child among the Peculiar People or Christian Scientists would ever be heard of. Probably, however, neighbours would be ready to give information if to do so was of any practical utility. At present little can be done except in certain cases where removal is necessary for the purpose of isolation. It must be borne in mind that the sects named do not exhaust the numbers of those who, for religious reasons, disapprove of scientific interference and similar sects may be brought into being. Moreover, it is not easy to see why religious motive on the part of our fellow citizens should excuse our practically acquiescing in the pain and death of their children. We should not, presumably, allow members of fanatical sects to flagellate their children, or to starve them, or to make them perform dangerous acts as tests of their childish faith in accordance with the precepts of a religion devised by some one emulous of the success, financial and otherwise, of Mrs. Eddy. If, however, the religious motive prevents us from inflicting a deterrent punishment when the law is broken we might supply ourselves with means for preventing as far as possible the suffering and death of helpless children.

Bogus Degrees

The libel action Garnett *v.* Clarke tried in the King's Bench Division on June 15th and 16th, in which the bogus degrees conferred by "Harriman University," of Tennessee, U.S.A., formed the subject of inquiry, is of considerable interest to the medical profession. It not infrequently happens that a quack summoned under the Medical Act for the use of titles implying registration endeavours to treat the matter as if the offence were a merely technical one and although he cannot allege that he ever possessed qualifications recognised as such in Great Britain, instructs his counsel to urge on his behalf, in mitigation of an inevitable penalty, that he is a graduate of a university abroad holding highly sounding degrees and to be regarded as a person trained to practise medicine, but excluded by professional jealousy from doing so in this country. The University of Harriman appears to exist to some extent as an educational centre—that is to say, there was evidence that some part of the buildings are in use, though dirty and ill-kept, as a school for boys and girls. Moreover, of 26 professors included in the list of its instructors five were actually traceable as existing, one of whom at the time of inquiry occupied the chair of "domestic science" when not putting principle into practice as housekeeper to an oil agent who, with his wife, lived in a portion of the university buildings The university also possesses a chancellor, for he made a personal offer to confer upon Mr. Garnett, the plaintiff in the libel action, the degree of S.T.D., in addition to that of D.D., apparently without extra charge. The letters S.T.D. were explained by Mr. Garnett in the witness-box as standing for *Sacra Theologia Doctoris*, and the erudition of members of the university was further attested by a letter of the obliging chancellor, who wrote: "I have so arranged your name as to cause my books to show that your degree has been earned and it will come *pro merito* and not *pro honoris*." The examination for the degrees thus earned by Mr. Garnett took place at Ocean Grove and at Philadelphia and he admitted that he had never been to Harriman in his life, although he demurred to the suggestion that he had not been within 1000 miles of it The article, moreover, in the *Christian World* which formed the subject of the libel action, disclosed that a recipient of a Harriman B.A. degree had been examined in the house of Mr. Garnett in London and that the papers had been forwarded sealed to Harriman, or at all events to the United States, to be looked over. Mr. Garnett himself seems to have taken the degrees of B.A., M.A., B.D., and D.D, and really at the price a man less easily contented might have had a few more without laying himself open to the charge of extravagance, for matriculation at Harriman costs 10 dollars, the examination such as Mr. Garnett successfully underwent is charged at 30 dollars, and degrees can be had at 10 dollars apiece. No evidence that medical degrees have been conferred at Harriman was given, but the university does not confine itself to theology, for besides the professor of domestic science already mentioned a professor of astronomy was spoken of who, in non-professional moments, practises as a dentist and legal instruction was described as occupying one week in the year. In any case Harriman University does not stand alone. It is merely a striking example of institutions not confined to the United States which exist, but do not flourish, for the dissemination of bogus titles to the deception of the ignorant and unwary. The *Christian World* is to be congratulated upon the full and public exposure which it has brought about.

New Milk Deficient in Fat.

The Divisional Court in a recent case upheld the conviction of a milk-seller, under the Sale of Food and Drugs Act, 1875, for selling (on being asked for new milk by the inspector) a liquid which had been taken directly from the cow and had not been tampered with or adulterated, but which in consequence of the length of time which had elapsed since the cow had last been milked, was deficient in fat to an extent of 30 per cent., the remainder of the fat having been absorbed by the cow during the unduly long interval between the milkings, the offence being that the article was not of the quality demanded of him.

Adulteration.—Sale by a Limited Company.—Previous Knowledge of Purchaser as to Adulteration.

The Divisional Court in a recent case decided (1) that a limited company is a "person" within the meaning of Section 6 of the Sale of Food and Drugs Act, 1875, and therefore could be convicted; and (2) that a sale may be to the prejudice of the purchaser although the purchaser had previous knowledge, not derived from information given by the seller, that the article sold was not of the nature, substance, and quality demanded by him. The test is: Whether the sale would have been to the prejudice of a purchaser who had not that special knowledge.

Accident Insurance.—Was Death caused by Accident or Intervening Cause?

Mr. Justice Wright recently heard the case of Mardorf *v.* Accident Insurance Co., in which the assured person had taken out an accident insurance policy with the condition that it should not apply to "death" caused by, or arising wholly or in part from, any "intervening cause." The assured on July 2nd accidentally inflicted a wound on his leg with his thumb-nail. His leg became inflamed and on July 9th erysipelas had set in. This was followed on July 12th by septicæmia and on July 16th by septic pneumonia, from which complaint he died on July 22nd. It was conceded by the insurance company that the septic germs, the development of which resulted in the man's death, were introduced into his body at the time of the infliction of the wound. Mr. Justice Wright held that the erysipelas, septicæmia, and septic pneumonia were not "intervening causes" within the meaning of the policy but merely different stages in the development of the septic condition which was immediately brought about by the introduction of the poison and that the man's death was directly and solely caused by the accidental injury to his leg.

Vinegar of Squills.—Acetic Acid.—Standard of Quality.—Analyst's Certificate.

In the recent appeal case of Hudson *v.* Bridge the Divisional Court held that the court of summary jurisdiction was wrong in deciding that there was a standard for the quantity of acetic acid which should be present in vinegar of squills. The court was also of opinion that the analyst's certificate should have reported that the article in question was liable to decomposition and as the certificate did not do so it was void under the schedule to the Sale of Food and Drugs Act, 1875, which provides that: "In the case of the certificate regarding milk, butter, *or any article liable to decomposition*, the analyst shall specially report whether any change had taken place in the constitution of the article that would interfere with analysis."

The Power of an Inspector to procure Samples of Milk outside his own District.

The Divisional Court in the recent case of McNair *v.* Cave decided, with some reluctance, that the power conferred upon inspectors under Section 3 of the Sale of Food and Drugs Act Amendment Act, 1879, to procure at the "place of delivery" a sample of milk in course of delivery to the purchaser in pursuance of a contract of sale cannot be exercised by an inspector outside the district for which he is appointed For instance, an inspector for the city of Westminster cannot intercept at St. Pancras milk intended ultimately for a dairyman carrying on business at Westminster.

When is a Home for Epileptics a "Hospital"?

The Divisional Court in the recent case of Ormskirk Union *v.* Chorlton Union decided that an institution having for its object the care and treatment of persons suffering from epilepsy, which was partially supported by endowments and partially by donations and payments made on behalf of the patient, is a hospital within the meaning of Section 1 of the Poor Removal Act, 1846. One of the judges remarked: "In my opinion a hospital is none the less a hospital because some patients may make payments. It would be placing a great burden upon parishes in which institutions such as these are situated if the residence of patients in them were to have the effect of making the parish liable to support them."

Admixture of Arsenic in Beer.—Analyst's Certificate.—Sufficiency of Particulars.

The Divisional Court in the case of Goulder *v.* Rook decided that a certificate of a public analyst which merely states that a sample of beer submitted to him for analysis "contains a serious quantity of arsenic" is insufficient. The certificate should be more explicit and should contain exact details sufficient to enable the magistrate to come to a conclusion.

The Liability of a Surgeon for Lack of Skill and Care.

In the case of Lanphier *v.* Phipos, which was an action against a surgeon for "carelessness, negligence, and unskilfulness," it was said in the judgment: "Every person who enters into a learned profession undertakes to bring to the exercise of it a reasonable degree of skill and care; he does not, if he is an attorney, undertake to gain a cause in all events; nor does a surgeon undertake that he will perform a cure; nor does the latter undertake to use the highest possible degree of skill, as there may be persons of higher education and greater advantages than himself; but he does undertake to bring a fair, reasonable, and competent degree of skill; and in an action against him by a patient the question for the jury is whether the injury complained of must be referred to the want of a proper degree of skill and care in the defendant or not." And in the leading case of Rich *v.* Pierpont it was laid down that to render a medical man liable for negligence or want of due care or skill it is not enough that there has been a less degree of skill than some other medical man might have shown, or a less degree of care than even he himself might have bestowed; nor is it enough that the practitioner himself admitted some degree of want of care; there must be proof that there has been a want of competent and ordinary care and skill, and to such a degree as to have led to a bad result.

Conclusiveness of Certificate of Medical Referee: Workmen's Compensation Act, 1897.

The Court of Session in the case of M'Avan *v.* Boase Spinning Company held that the certificate given by a medical referee under Schedule I. of the Act (stating that a workman who was in receipt of weekly payments under the Act had recovered from the injuries in respect of which the payments were made, and that although he was suffering from partial disability for work such disability was not connected with the injuries, but was "the result of deficient natural vigour of constitution, together with advancing years"), *was conclusive* against any further claim by the workman for compensation under the Act.

ASYLUM REPORTS.

Cumberland and Westmorland Asylum (Annual Report for 1902).—The average number of patients resident during the year was 677, comprising 344 males and 333 females. The admissions during the year amounted to 190—viz., 88 males and 102 females. Of these 142 were first admissions. Dr. W. F. Farquharson, the medical superintendent, states in his report that the number of admissions was considerably above the average of recent years and had only twice been exceeded in the history of the asylum. Of the 190 patients admitted 176 were chargeable to the rates and 14 were private patients. "The admissions include four cases of congenital imbecility, five cases of epilepsy, two cases of general paralysis, 18 patients over 70 years of age, and five cases transferred from other asylums; the great majority of the cases just enumerated were incurable, and the remainder of the admissions included an unusually large proportion of unfavourable cases." In 28 cases the attack of insanity had lasted more than a year before the patient was taken to the asylum. Nearly two-thirds of the patients were admitted in weak health, seven were in a very exhausted and feeble state, and several died shortly after admission. 57 of the patients who were admitted had suicidal tendencies and 21 had actually attempted suicide. A great variety of causes of insanity was assigned for the cases admitted. Conditions affecting the bodily health were responsible for the onset of insanity much more frequently than were mental shocks or business worries. By far the most important of the causes was hereditary predisposition to insanity, which was ascertained in 32 per cent. of the cases, though it probably existed, adds Dr. Farquharson, in a much larger proportion. In 11·5 per of cent. cases alcoholic intemperance was the exciting cause of insanity as compared with 17·7 per cent. of cases in 1901 and 20·3 per cent. in 1900. "It is pleasing to be able to record," adds Dr. Farquharson, "a diminution in the number of cases due to a preventable cause such as alcoholism. It is to be hoped that the new Licensing Act will have a decided influence in reducing drunkenness, and if it has that effect the community will in time reap the benefit in a diminished amount of insanity and crime." The number of patients discharged as recovered during the year amounted to 70, or 10·3 per cent. of the average number resident. The deaths during the year amounted to 61, or 9 per cent. as calculated on the same basis. Of the deaths, three were due to pneumonia, four to general paralysis of the insane, four to pulmonary tuberculosis, seven each to organic brain disease and senile decay, eight to epilepsy, 13 to cardiac disease, and the rest to other causes. A post-mortem examination was made on every patient who died. The general health of the inmates was good and there was an absence of epidemic or zymotic disease during the year.' The Commissioners in Lunacy state in their report that the patients were neatly dressed, that the wards were comfortable and the building in good order, that the food of the patients was satisfactory and evidently relished by them, and that the medical case-books were very satisfactorily kept. The committee of management states in its report that the weekly charge of maintenance was 9*s.* 4*d* per patient and that extensions to the building are proposed to be made at a cost of £37,000.

Leicester Borough Asylum (Annual Report for 1902).—The average number of patients resident during the year was 791, comprising 326 males and 465 females. The admissions during the year amounted to 197—viz., 72 males and 125 females. Of these 164 were first admissions. Dr. J. E. Montague Finch, the medical superintendent, states in his report that of the 740 patients remaining in the asylum at the end of the year 1902 13 men and 15 women were deemed curable. An unusually large number of patients have been actively suicidal during the year and several determined attempts at self-destruction were made. The principal causes of insanity in the admissions were heredity in 34 cases, alcoholic intemperance in 17 cases, domestic trouble and adverse circumstances in 14 cases, and recurrence of a previous attack in 20 cases. The number of patients discharged as recovered during the year amounted to 68, comprising 29 males and 39 females, or 8·6 per cent. of the average number resident. The deaths during the year amounted to 75—viz., 31 males and 44 females, or 9·4 per cent. as calculated on the same basis. Of the deaths three were due to cerebral hæmorrhage, three to pneumonia, five to cerebral softening, seven to cardiac disease, eight to pulmonary tuberculosis, nine to senile decay, 10 to influenza, 16 to general paralysis of the insane, and the rest to other causes. "The death-rate in 1902," adds Dr. Finch, "was somewhat higher than in the previous year, partly in consequence of an outbreak of epidemic influenza from which ten female patients died, and also owing to the very unfavourable state of the bodily health of many of the admissions, no fewer than six patients having died in less than a week after admission ...... Most of these patients had to be carried in when bought here and never left their beds. The number of bedridden and aged patients continue to increase." A considerable number of improvements and alterations have been effected during the year in regard to facilities for escape in case of fire and with reference to increase of water-supply in case of emergency. The Commissioners in Lunacy state in their report that the general condition of the asylum was excellent, that the wards were bright and plentifully supplied with objects of interest, that the dormitories and bedding were in a thoroughly satisfactory condition, that the patients were neatly clad and orderly in behaviour, and that the medical case-books were well kept. The committee of management states in its report that since the date of the previous report extensions and additions have been carried out in the laundry and administrative buildings without exceeding the estimates. "Previous to the disastrous fire at Colney Hatch Asylum there was found to be some danger in the old part of the asylum. ...... This has been remedied and fire-proof doors between the blocks [and wards] are being added. An additional emergency staircase on the female side has also been constructed." The committee has had under consideration the question of a pension scheme for all officers and servants of the asylum and this scheme when adopted by the committee will shortly be submitted to the Leicester borough council for its approval.

ANKYLOSTOMIASIS AMONG MINERS.

AT the Fourteenth International Congress of Miners, which met recently at Brussels, an interesting discussion was held on the spread of Ankylostoma Duodenale among Coal Miners. There were 75 delegates attending this congress representing five different nationalities and 1,271,500 miners. Such a representative gathering should exercise considerable influence, particularly when the demands made are such as meet the claims of humanity and the interests of the community at large. On this occasion the question of the prevention of ankylostomiasis was introduced by the German delegates. They pointed out that the disease had spread far and wide before its particular character was discovered. The patients were treated as suffering from anæmia and some years elapsed before it was ascertained that the symptoms were caused by the presence of a parasite in the intestines. The newspapers representing the interests of the German miners published many articles on the increase of sickness among the men who worked in the coal-pits. They protested that the sanitary measures prescribed by the members of the medical profession and even those decreed by the law were not applied. It was only after some years of such propaganda that the German Government was at last induced to institute an official inquiry and then it was discovered that in the coal-fields of Ruhr alone there were more than 25,000 miners affected. In four mines particularly affected every miner was carefully examined and there it was found that 90 per cent. had eggs of the worm. The disease seems to have been gaining ground in Germany ever since 1896 and [illegible] ding to the official [illegible] miners had been reduced from 45 to 40 years. They explained that their figures were absolutely trustworthy, for the system of obligatory and universal insurance inforced throughout the German Empire rendered it necessary for the State to keep and to publish elaborate statistics. Nevertheless no explanation was given as to what these figures meant. Was it that the average duration of life among the mining population had been reduced from 45 to 40 years, or that the adult male miner, having survived the perils of childhood, was now only able on an average to work for 40 years? whereas before the year 1896 this average was estimated at 45 years. In any case it is obvious that considerable harm has been done. Extractum filicis maris was the only remedy that had proved efficacious, but the cure was as bad as the disease, for it produced great prostration and sometimes blindness ensued.

The Belgian delegates confirmed what the Germans had said. In the Liège coal-fields a case of ankylostomiasis had been reported in 1883 and a death was attributed to this cause in 1884, but nothing was done, no precautionary measures were taken, till the year 1896. The provincial authorities then appointed a medical committee to inquire into the matter and in certain mines it was discovered that the eggs of the worm were present in the fæces of from 70 to 80 per cent. of the miners. This does not mean that they were all ill, for the egg does not always develop into the larva, and it is only when the worm, a thread-like worm, exists in large numbers that the health of the patient is seriously affected. But it seems impossible to deal with the eggs, for they maintain their vitality even when treated with concentrated sulphuric acid. The disease is a local disease. For instance, on the plain of Herve only one case of infection was found as the result of 1600 analyses. But in one other mine in this same district from 60 to 70 per cent. of the miners were infected.

The British delegates were not able to throw any light on the subject, though Mr. Abraham, M.P., did remark that this complaint had occurred among the miners of Cornwall and that the British Government had taken some precautionary measures to prevent the disease from spreading to the coal mines of the country. As to the nature of such precautions there was a common agreement as to what they should be. It seemed generally admitted that this worm was introduced in various coal mines by some Italian labourers who had been engaged on the St. Gothard tunnel works, where the disease was very prevalent. The dejections were the chief source of contamination. The first and most essential precaution was the introduction of portable sanitary pails in all mines and the adoption of rigorous measures to insure that these pails should be used on every occasion. Where the mine was already infected the miners must be careful not to drink any running water but only such water as was brought down from the surface and known to be clean. Before eating the miners should wash their hands and avoid as much as possible touching their mouths with their fingers whilst at work. Also, so as not to take coal-dust, mud, and earth home from the mines, it was suggested that baths should be provided at the pit's brow and that the miner should wash and change his clothes before he went home. There were cases where the disease had spread from the miner to his family and village. The delegates freely admitted that it would be difficult to persuade all the miners to take such precautions and that the spread of the disease was in part due to their own carelessness. But the authorities were also to blame, they were very slow to act. In Germany the Government had frankly confessed that it had not the means of coping with the disease, the necessary measures would cost too much. When, however, there was a proposal to increase the strength of the navy no such arguments were brought forth and yet the strength of the nation primarily depended on the health of the people. The German delegates insisted that it was a short-sighted policy to allow such diseases to spread. In the North of France, a French delegate explained, the disease had occurred in one coal-mine. The best medical authorities were sent there from Paris, the matter was thoroughly investigated, rigorous measures were taken, and the disease was stamped out. Many lives and much money would have been saved and much suffering and distress prevented if the authorities in Germany and Belgium had been as prompt to act as their neighbours of the Pas-de-Calais coalfields.

PROGRAMME OF THE ELEVENTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

THE Eleventh International Congress of Hygiene and Demography will meet in Brussels from Wednesday, Sept. 2nd, to Tuesday, Sept. 8th, this year. On Tuesday, Sept. 1st, the international committee of the International Association of the Medical Press will likewise meet in Brussels. According to information just obtained in Brussels about 800 members of the Congress of Hygiene have been enrolled and it is not expected that more than from 1200 to 1500 members will attend. This would be only about half the number that were present at the ninth congress which met at Madrid in 1898. The explanation given to account for this difference is that Brussels is so close at hand and so well known. A pretext for a journey to Spain rarely occurs and therefore many more people availed themselves of the opportunity. However this may be, the falling off in the number of attendants is considered as a most fortunate circumstance. These congresses were being killed by their prosperity and the crowds which they gathered together became quite unmanageable. At Brussels it is hoped that there will be no such crush. On the other hand, there is every promise of good work being done from the technical point of view. The executive committee or central bureau is composed exclusively of practitioners in regard to hygiene

In Belgium the public health services are connected with the Ministry of Agriculture, and the president of the executive committee is M. E. Beco, secretary-general of the

Ministry of Agriculture, intrusted with the general direction of public health services, of hygiene of the roads and ways, at Brussels. The vice-presidents are Dr. A. Devaux, inspector-general of the public health services, and M. J. Leclerc, president of the Central Statistical Commission. The secretary-general is the well-known sanitary reformer and faithful attendant at the International Congresses of Hygiene, Dr. Félix Putzeys, professor at the Liège University Faculty of Medicine. His address is No. 1, rue Forgeur, Liège, Belgium. Communications may also be sent to the secretary, Dr. Voituron, Inspecteur au Service de Santé et de l'Hygiène, Ministère de l'Agriculture à Bruxelles.

Apart from this general committee of management there are special committees for each of the two Divisions and the seven sections into which the Congress is divided. The first Division—that of hygiene—has seven sections. The Demographical Division apparently will not this time be subdivided, though at the previous congresses there were generally two sections of demography. As usual, the first section in the Hygiene Division is devoted to bacteriology in its relations to public health. Dr. van Ermengem, of the Ghent University, is president. The secretaries are Dr. Bordet, director of the Bacteriological Institute of Brabant, and Dr. Malvoz, of the Liège University. Eminent authorities of different nationalities have been selected to present reports on various subjects. For instance, Dr. Bordet himself together with Dr. Denys of the Louvain University are assisted by Professor Max Gruber, Professor R. Pfeiffer, and Professor A. Wassermann, of the Universities of Munich. Königsberg, and Berlin respectively; and Dr. Belfandi, director of the Serotherapeutic Institute of Milan, will prepare and present a report on the action and origin of the active substances contained in the preventive and antitoxic serums. Dr. Roux of the Paris Pasteur Institute and Dr. Ehrlich of the Royal Institute of Experimental Therapeutics, Frankfort-on-the-Main, will report on the best methods of measuring the active properties of serums. Nine reporters from nine different nationalities will deal with anti-diphtheritic serum from the prophylactic point of view. Then there will be a report with regard to the unification of the processes for the bacteriological analysis of water.

The second section deals with food questions and the connexion between the science of the chemist and that of the veterinary surgeon in their application to hygiene. This section will unite with the first section to discuss a report on tuberculosis in men and in animals The secretaries of the second section are Dr. Stubbe, inspector of the veterinary services, and Dr. van Dam, food inspector, both at the Ministry of Agriculture, Brussels. There will be reports in this section on all that relates to milk-supply, on the sterilisation of tinned and preserved provisions, on the pasteurisation of milk, &c.

The third section is entitled Sanitary Technology and comprises the sciences of the architect and the engineer as applied to hygiene. M. Hachez, Ingénieur Inspecteur au Service de la Voirie, &c., Ministère de l'Agriculture à Bruxelles, is the secretary. There will be a report on the bacteriological treatment of sewage, and Mr. Gilbert J. Fowler, superintending chemist at the sewage works, Manchester, together with Dr. Rideal, vice-president of the Society of Public Analysts, London, and Dr. Dunbar of Hamburg, M. Launay of Paris, and M. Rolants of Lille, will draw up this document. Then the question of the separate system of drainage will be reported upon, and for this Mr. Roechling, civil engineer, of Leicester, is one of the reporters. The next subject has also two Englishmen among the reporters—namely, Mr. J. Allen Howe, B.Sc., conservator of the Geological Museum of London, and Mr. Horace B. Woodward, F.R.S., of the Geological Survey of England. Their subject is the conditions that should exist when waters from chalk soils have to be utilised for drinking purposes. Mr. Roechling is also to report on the sanitation of public roads and there are to be reports on the heating and ventilation of dwellings.

The fourth section is devoted to industrial and professional hygiene The secretary is M. Joseph Brughmans, factory inspector at the Ministère de l'Industrie et du Travail à Bruxelles. The first question for consideration is that of ankylostomiasis. There are Belgian, French, and two Hungarian reporters on this subject. The second report is on lead poisoning and Dr. T. Oliver of the Durham University, the medical expert attached to the Home Office, is one of the reporters. The physiology of fatigue and consequently the methods that should govern the organisation of various forms of labour is the third subject. Belgian, French, Italian, and German reporters have been appointed. The conditions of the linen factories and of the brush making trades are each the subjects of special reports. On the last-named subject Dr. T. M. Legge of the Home Office, London, is a reporter, while on the linen trade, Mr. E. H. Osborn, His Majesty's inspector of factories, Home Office, London, and Dr. H. S. Purdon of Belfast are reporters. Miss A. M. Anderson, His Majesty's principal lady inspector of factories, Westminster, is one of the reporters on the question of small workshops and home industries.

The fifth section is devoted to the hygiene of travelling or transport. M. Blancquaert, administrator of the Belgian State railways, will preside, and Dr. de Landsheere, Brussels, is the secretary. The means of preventing the spread of infectious diseases among railway servants and the best methods of disinfecting carriages that have served for the transport of passengers, cattle, or merchandise, are among the subjects to be discussed in this section.

The sixth section is somewhat of a mixed section, for it is to deal with administrative hygiene and presumably sanitary legislation with the prophylaxis of transmissible diseases, workmen's dwellings, and the hygiene of childhood. M. van Hulst, pharmacien *attaché à l'Inspection du* Service de Santé, Ministère de l'Agriculture à Bruxelles, is secretary. The first report is on the feeding of infants: Dr. P. Budin of Paris is one of the reporters. The inspection of schools is the next subject and then comes the war against tuberculosis on which Dr. Brouardel and Dr. Arthur Newsholme, medical officer of health of Brighton, are among the reporters. The question of the prevention of the plague has German, French, Dutch, and Hungarian reporters, but there are no Anglo-Indians, though they possess so much practical experience of this disease. Then there is a long list of the various ways in which the public authorities may help to solve the question of the housing of the poor. This, again, is a subject on which a British reporter might have had much to say, but there is no English name on the list

Finally, the seventh section is on colonial hygiene and Dr. Voituron, secretary of the Congress, is also secretary for this section. The diet of Europeans living in hot climates is the first subject on the list and Major Ronald Ross, C.B., Walter Myers Lecturer in the School of Tropical Medicine at Liverpool, is among the reporters. The prophylaxis of the sleeping sickness, that of beri-beri, and that of small-pox are the subjects of three reports. Dr. Patrick Manson, of the London School of Tropical Medicine, is one of the reporters. Dr. W. J. R. Simpson, of the London School of Tropical Medicine, is also on the list of reporters, and will deal with the question of organising the teaching of suitable medical treatment for colonists. Other subjects may be introduced, but these are the topics on which printed reports will be issued, if possible before the Congress meets, so that they may be satisfactorily discussed.

For the division of demography a great number of papers are announced. M. Armand Julin, Directeur au Ministère de l'Industrie et du Travail à Bruxelles; Professor Mahaim, à l'Université de Liège; and M. Vilmart, chef de la division d'hygiène de la ville de Bruxelles, are the joint secretaries of this Division. The reports to be presented deal with: (1) the causes of mortality and how they are registered in the different countries; (2) infant mortality and the necessity of uniform statistics; (3) an international nomenclature for the registering of the causes of death; (4) the means which demography affords of foretelling the decrease or increase of population; (5) the best coefficients for the study of the increase or decrease of populations due to marriages, births, and deaths; (6) the theory that the fluctuation in populations depends on the balance between their resources and their requirements; (7) statistics as to urban populations; (8) death-rates according to occupations; (9) how to deal with the spread of insanity; (10) mortality due to alcoholism; (11) migrations, over-population of towns; (12) what are the advantages of special statistics in regard to the poor; (13) statistics and causes of suicides; and (14) inventory and critical study of archives from the demographical point of view. Among the numerous reporters appointed to deal with these 14 different demographical *subjects the only English name* is that of Dr. J. F. W. Tatham, Superintendent of Statistics, General Register Office, Somerset House, London.

It is to be hoped that British sanitary reformers will take a more active part in the work of this Congress than they have done in regard to previous congresses. It is the greatest meeting of the kind held and it has had considerable influence in guiding various legislative assemblies. In any case, there is still time to join and there are few sanitary reformers who would not have something to say on one or more of the above subjects. Papers dealing with other questions should be sent in two months before the opening of the Congress. They may be written in any language, but must have a summary of their contents in French. During the Congress speeches are to be limited to a quarter of an hour and no one is to speak more than twice on the same subject. The executive committee will extract and publish beforehand all such new facts as may be found in these papers which are likely to lead to discussion. Anyone interested in public health questions may become a member of the Congress by applying to the secretary and sending the entrance fee of 25 francs or £1. The wives and daughters of members may, on paying a fee of 10 francs, be admitted to be present at the discussions and excursions without participating in the labours of the Congress. There will, of course, be many excursions and receptions, but the details are not yet settled. Finally there is to be an exhibition of any objects, plans, and drawings that are related to one or more of the subjects which the Congress is to discuss. The exhibitors will not be charged for the space allotted to them, *but they must themselves defray the* cost of the installation of their exhibits.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE *following are some of the* principal amounts, additional to those already announced in THE LANCET, which have been collected for the Fund :—

	£	s.	d.
[illegible]	1593	0	0
	435	0	0
	420	0	0
	371	0	0
	237	0	0
	228	0	0
	180	0	0
	173	0	0
	158	0	0
	152	0	0
	134	0	0
	113	0	0
St. Paul's, Upper Norwood...	109	0	0
St. Saviour's, Upper Chelsea	107	0	0
	104	0	0
	80	0	0
	54	0	0
	79	0	0
	74	0	0
	50	0	0
	50	0	0
	64	0	0
	63	0	0
	40	0	0
[illegible] Hill Chapel ...	40	0	0
	77	0	0
	36	0	0
	30	0	0
	46	0	0
	46	0	0
	33	0	0
	42	0	0
[illegible] Church	82	0	0
	35	0	0
	34	0	0
[illegible]	63	0	0
	54	0	0
	62	0	0
	47	0	0
	51	0	0
	49	0	0
	30	0	0
	32	0	0
	31	0	0
	36	0	0
	52	0	0
	57	0	0
	35	0	0
	33	0	0
	60	0	0
	[illegible]	0	0
St. Andrew's, Leytonstone ...	31	0	0
All Saints', Upper Norwood	36	0	0
Brixton Unitarian Church ...	34	0	0
St. Alban's, Holborn ...	38	0	0
St. Giles's-in-the-Fields Parish Church	33	0	0
St. Mark's, Notting hill ...	35	0	0
Christ Church, Bromley Park	43	0	0
All Saints', Clapham Park ...			

Looking Back.

FROM

THE LANCET, *SATURDAY*, JUNE 25, 1825.

FOREIGN DEPARTMENT.

ANALYSIS OF FOREIGN MEDICAL JOURNALS.

REVUE MEDICALE—APRIL.

Curious case of the escape of an ear of Barley through the sides of the Chest, about five months after it had been swallowed.

Francis Perron, aged 19, swallowed, towards the latter end of August, 1824, a green ear of barley. This circumstance occasioned no particular uneasiness at the time, and Perron thought nothing more of it. On the 9th of September, however, whilst working at the wharf as usual, he became overheated, and drank a glass of cold water. Four hours after, a very severe pain was felt on the right side, in the vicinity of the seventh and eighth ribs, accompanied with oppression, cough, and sanguineous expectoration. The next morning the symptoms were appeased, but appeared to renew themselves every two days. The man gradually grew worse, and was admitted into the hospital on the 14th of September. At this time the cough was more frequent, but the expectoration less; the respiration, although difficult, sounded well in all parts of the chest: a slight mucous guggle was perceptible, and no sign of *hegophonie* was discoverable; at this time a pricking sensation was felt about the ribs before named, when the cough came on. The pulse was quick and soft, the skin hot, the tongue clean, and the bowels were constipated; a swelling could now be perceived on the right side of the thorax. Frequent general and local bleedings, with a strict antiphlogistic regimen, allayed *these symptoms; but they again appeared on the* 19th and 22nd. The lower part of the chest became prominent toward the convexity of the ribs, and a painful circumscribed tumour was easily detected. The cough continued, and accompanied with a copious mucous expectoration.

27th. Fluctuation in the tumour very perceptible; on pressing on it, the cough, expectoration, and pain, became increased; by continuing the pressure, blood was ejected as in hæmoptysis. The man lay on his left side, and now expectorated a thick puriform fluid with the mucus, communicating a putrescent flavour to the taste. M. LISFRANC was consulted, who considered it imprudent to open the tumour. The application of the stethoscope gave a dull feeble sound in this part, but there was no *tintement metallique.* On the 18th of October, an issue was put on the apex, and on the 25th another at the base of the tumour; it being thought probable, on the eschars coming out, a puncture might be made through one of the wounds, or that the thinness of the covering of the abscess would favour the escape of the matter. This, as was expected, did happen on the 6th of November, but between the two wounds. A large quantity of pus escaped, and the symptoms rapidly subsided. About a month after the first discharge, a new fistula formed, from which there came, on the 30th of December, a longish body of a green colour, about two inches in length, and everywhere covered by a thick mucous plastering.

On the 11th of January, thirteen days after the appearance of the first body, another presented itself quite similar to the preceding, but with the barb, and not the pedicle, foremost. These two substances were immediately recognised, as the blade of the *hordeum murinum*, which had been swallowed five months previously. Perron now grew better, and in a short time was perfectly well. One circumstance was observed, on the discharge of the last piece, worthy of remark—that of the forcible escape of air through the last fistulous opening at each expiration.

This lasted twenty-four hours, and returned only when the man lay on his back, or coughed. Percussion furnished no criterion, on account of the position and the extent of the abscess, *allowing but of its imperfect application.* Many cases have occurred of hard bodies making a passage through different structures; but, as M. BALLY says, "That a green flexible substance, like an ear of barley, should be able, without becoming either altered or bent, to traverse through one half of the thorax, is a phenomenon almost incomprehensible." It is presumed the barley-ear did not separate in two until after the abscess had formed, otherwise it would most probably have effected two distinct passages. The fluid contained in the abscess allowing of the latter piece to change its position, and make its transit at its opposite point.—*Sittings of the Royal Academy of Medicine.*

THE BATTLE OF THE CLUBS.

ON p. 86 of our advertisement columns in this number of THE LANCET will be seen a notice concerning the County of Durham Medical Union. The Friendly Societies Medical Association of Sunderland is now advertising for a second medical officer and we beg that any of our readers who may be thinking of applying for this post will, in the first place, consult either Messrs. Graham and Shepherd, 32, John-street, Sunderland, who are the secretaries of the County of Durham Medical Union, or Mr. Garforth Drury, 55, Pilgrim-street, Newcastle-on-Tyne, who is the secretary of the Northumberland and Newcastle Medical Association. It is most important that medical men should assist medical unions in their efforts to secure increased payments for contract work and that applicants should be made aware of the false position in which they will find themselves should they accept lower rates of pay than those agreed upon by the medical unions in question.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8914 births and 4138 deaths were registered during the week ending June 20th. The annual rate of mortality in these towns, which had been 14·9, 14·3, and 13·9 per 1000 in the three preceding weeks, rose again last week to 14·3 per 1000. In London the death-rate was 13·1 per 1000, while it averaged 14·8 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 4·7 in Hornsey, 6·2 in Willesden, 6·3 in Handsworth, 6·7 in Tottenham, 7·1 in East Ham, 7·4 in Kings Norton, 7·6 in Ipswich, and 8·0 in Southampton; the highest rates were 19·0 in Sheffield, 19·8 in Grimsby and in Huddersfield, 21·0 in Rotherham, 22·0 in Birkenhead, 23·0 in Middlesbrough, 28·5 in Wigan, and 28·7 in Coventry. The 4138 deaths in these towns last week included 415 which resulted from the principal infectious diseases, against 434, 397, and 404 in the three preceding weeks; of these 415 deaths 136 were referred to measles, 99 to whooping-cough, 73 to diarrhœa, 42 to diphtheria, 38 to scarlet fever, 20 to "fever" (principally enteric), and seven to small-pox. In Hornsey, Southampton, Northampton, Derby, York, South Shields, Gateshead, Newcastle-on-Tyne, and in 10 other smaller towns no death from any of these diseases was registered, while they caused the highest death-rates in Great Yarmouth, Aston Manor, Coventry, Wigan, Oldham, Sheffield, Middlesbrough, and Merthyr Tydvil. The greatest proportional mortality from measles occurred in Wolverhampton, Birmingham, Coventry, Wigan, Sheffield, and Middlesbrough; from scarlet fever in Merthyr Tydvil; from diphtheria in Oldham; from whooping-cough in Birkenhead, Burnley, and Sheffield; and from "fever" in Grimsby. Three fatal cases of small-pox were registered in Oldham, two in Liverpool, one in Manchester, and one in Bradford, but not one in any other of the 76 large towns. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals on Saturday last, the 20th inst., was 70, against 60, 72, and 64 on the three preceding Saturdays; 16 new cases were admitted during the week, against 10, 24, and nine in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 1771, 1785, and 1710, at the end of the three preceding weeks had further declined to 1649 at the end of last week; 170 new cases were admitted during the week, against 225, 210, and 145 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 186, 171, and 141 in the three preceding weeks, further declined last week to 134 and were 33 below the number in the corresponding period of last year. The causes of 40, or 1·0 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Nottingham, Bradford, Leeds, and in 50 other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, St. Helens, Warrington, Manchester, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 18·4, 18·2, and 17·5 per 1000 in the three preceding weeks, further declined to 17·0 per 1000 during the week ending June 20th, but was 2·7 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 13·7 in Leith and 14·5 in Paisley to 18·2 in Dundee and 20·1 in Perth. The 558 deaths in these towns included 16 which resulted from whooping-cough, 14 from diarrhœa, nine from measles, four from scarlet fever, three from "fever," and one from diphtheria, but not one from small-pox. In all, 47 deaths resulted from these principal infectious diseases last week, against 70, 65, and 49 in the three preceding weeks. These 47 deaths were equal to an annual rate of 1·4 per 1000, which corresponded with the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 28, 25, and 20 in the three preceding weeks, further declined last week to 16, of which eight were registered in Glasgow, four in Edinburgh, and two in Paisley. The deaths from diarrhœa, which had been 18 and 20 in the two preceding weeks, declined again to 14 last week and included 11 in Glasgow. The fatal cases of measles, which had been seven, nine, and three in the three preceding weeks, rose again last week to nine, of which four occurred in Glasgow, three in Edinburgh, and two in Paisley. The deaths from scarlet fever, which had been six, seven, and three in the three preceding weeks, increased again to four last week, and included two in Edinburgh. Of the three fatal cases of "fever" recorded last week, two occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 114, 111, and 75 in the three preceding weeks, further decreased last week to 73, and were 23 below the number in the corresponding period of last year. The causes of 19, or more than 3 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 22·2, 22·7, and 22·4 per 1000 in the three preceding weeks, further declined to 19·7 per 1000 during the week ending June 20th. During the past four weeks the death-rate has averaged 21·0 per 1000, the rates during the same period being 13·3 in London and 17·7 in Edinburgh. The 143 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 20 from the number in the preceding week and included 11 which were referred to the principal infectious diseases, against seven, ten, and nine in the three preceding weeks; of these six resulted from whooping-cough, three from small-pox, one from measles, and one from scarlet fever, but not one from diphtheria, from "fever," or from diarrhœa. These 11 deaths were equal to an annual rate of 1·5 per 1000, the death-rates last week from the same diseases being 1·5 in London and 1·6 in Edinburgh. The deaths referred to whooping-cough, which had been two, one, and five in the three preceding weeks, further rose last week to six. The fatal cases of small-pox, which had been three and one in the two preceding weeks, increased again to three last week. The 143 deaths in Dublin last week included 29 of children under one year of age and 26 of persons aged 60 years and upwards; the deaths of infants corresponded with the number in the preceding week, while those of elderly persons showed a marked decline. One inquest case was registered, but no death from violence was recorded; and 57, or almost 40 per cent., of the deaths occurred in institutions. The causes of seven, or nearly 5 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeon C. W. Buchanan-Hamilton to the *Leviathan*. Staff Surgeon A. G. Andrews to the *St. Vincent*. Surgeon T. B. Shaw to the *Hyacinth*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant Hughes joins at Aldershot and is posted to the Cambridge Hospital for duty. Captain L. N. Lloyd joins at Aldershot and is posted to the Connaught Hospital for duty. Captain G. Dansey-Browning is posted for duty to the new Princess Louise Hospital at Alton. [illegible] Watson is appointed to the medical [illegible] Margaret Hospital for Women and [illegible]

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Kent: Surgeon-Lieutenant C. M. Anderson resigns his commission. Dated June 20th, 1903. 1st Norfolk: Surgeon-Major S. W. Woollett resigns his commission. Dated June 20th, 1903

Rifle: 3rd Volunteer Battalion the Queen's (Royal West Surrey Regiment): Surgeon-Captain J. F. Hall resigns his commission. Dated June 20th, 1903. 3rd Volunteer Battalion the East Surrey Regiment: Alfred Landon Watler Whitehouse to be Surgeon-Lieutenant. Dated June 20th, 1903. 3rd Glamorgan: Surgeon-Lieutenant G. A. Stephens to be Surgeon-Captain. Dated June 20th, 1903. 4th Middlesex (West London): Frederic Richard Miller to be Surgeon-Lieutenant. Dated June 20th, 1903.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The Woolwich Companies: Captain A. S. Greenway to be Major. Dated June 20th, 1903.

THE WOOLWICH EXPLOSION.

In connexion with the recent deplorable lyddite explosion at the Royal Arsenal, we venture to express a hope that the most liberal interpretation of existing laws and regulations regarding the allowances to be granted to the wives and families of the killed and injured workmen will be given by the War Office, and we are glad to recognise that there seems to be every disposition on the part of the War Minister to act in this spirit. It has to be borne in mind that notwithstanding every precaution that can be taken to guard against accident the workmen who deal with high explosives of a horribly dangerous character run greater hazards in their work than probably fall to the lot of a soldier in war. It is lamentable to think that this nation is driven in times of peace and in order to prepare for war to manufacture such terrible instruments of destruction just because all the other military Powers do so, but so it is. All that can be done in the meantime is to see that no possible precaution is neglected and when accidents do unhappily occur to insure for the victims' wives and families generous and sympathetic treatment.

THE RESULT OF THE COURT-MARTIAL IN THE CAPE RAGGING CASE.

Although those directly concerned in this case may fairly congratulate themselves on the result of the late court-martial, it will nevertheless be held by all, whether military officers or civilians, who have the interest of the army at heart that the sooner it is understood that the King's uniform cannot be permitted to cover conduct of this sort the better. In saying this we are content to form our judgment entirely on the admissions that were made by the officers themselves in their evidence before the court as to what had taken place at Cape Town. The whole transaction was, to say the least, discreditable. We do not hear anything of scandals of this sort in the Royal Navy or in the scientific branches of the military service—the Royal Artillery and the Royal Engineers or in the Royal Army Medical Corps—and it is time that we ceased to hear of them elsewhere.

THE SOMALILAND WAR.

The white man's burden is a heavy and pretty continuous weight in supplying the calls of the Empire. Things have not been going well in Somaliland, where the British troops are in a very awkward position owing to the close proximity of the bulk of the Mullah's forces which are threatening General Manning's line of communication. Some reinforcements have been sent from Aden and others are ordered from India and Major-General Egerton, who has had much and recent experience in Indian warfare, has been nominated for the command in Somaliland. The difficulties of the climate and country are very great, owing to the want of water for one thing and to that of suitable transport for another. The hospital arrangements and supplies will need to be very carefully thought out in order to adapt them to the nature and requirements of such a campaign. These have been engaging the attention of the military medical service in India in connexion with the reinforcements proceeding from that country.

THE ROYAL ARMY MEDICAL CORPS SOUTH AFRICA FUND.

A sum of about £110 remains in the hands of the honorary treasurer, the greater portion of which has been returned from South Africa, being the unexpended balance of an amount sent there for local requirements during the war. With a view to close the fund finally it is proposed to hand over the money to the Compassionate Branch of the Royal Army Medical Corps Fund, lately organised by the Director-General, as it will then be available for cases of need amongst the men, women, and children of the corps. H.R.H. the Princess Christian has graciously signified her approval of the suggestion, which reaches us signed by M. Symonds (honorary treasurer), M. L. Muir (honorary secretary), and H. S. Muir (chairman of the committee). Should no expression of dissent be received from subscribers within the next few days it will be assumed that they concur.

DEATHS IN THE SERVICES.

Inspector-General of Hospitals Michael Waistell Cowan, M.D. Edin., R.N. (retired), at Leigh, near Worcester, on June 20th, aged 72 years. He entered the navy as a surgeon in 1854 and became staff surgeon in 1864, fleet surgeon in 1876, and inspector-general of hospitals in 1888. He retired in 1890. He served in the Black Sea during the Russian war.

Correspondence.

"Audi alteram partem."

ENTERIC FEVER AMONG THE NATIVES OF INDIA AS A SOURCE OF ARMY DISEASE.

To the Editors of THE LANCET.

SIRS,—Those of us who in the years past have recognised the identity of the Indian enteric fever with that existent among other sections of the world's races, regarding it everywhere as a specific disease and, so far as the army is concerned, referring its source of origin as a rule to the native or other communities with which the soldier comes in [illegible] temporary colonies abroad, will find in the [illegible] the Differen- [illegible] of the Tropics [illegible] of May 30th, [illegible] issued Army Medical Report, 1901, p. 160, Enteric Fever among Natives of India, statements which must, I think, remove the doubt existent among some both as to the presence of the disease among the natives of that land and as to the source from which the major part of the army disease derives its existence and place the basis of preventive measures on assured grounds.

A historical sketch of the line of advancing knowledge of this disease in India, culminating in what we may now regard as the recognition of its identity with that elsewhere existent, among natives as among Europeans and half-castes, and owning one common universal cause, though a subject of considerable interest, would cover too much of your valuable space. But as partly elucidatory of the progress of thought and risking the possibility of being regarded egotistical, I may say that in 1882, from my knowledge of the writings of others and from personal observations, I noted[1] that "the existence of the disease in India is beyond the region of doubt and in clinical and post-mortem details at least it follows the

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[1] Enteric Fever, Illustrated by Army Data at home and abroad, p. 77.

European disease"; that (p. 138) "the specific theory more closely embraces the military data than any other and is the only one which meets the requirements of the facts"; that evidence in support of this conclusion so far as India was concerned was not wanting; and that (p. 193) the "chief obstacle to the view of a derivation of the enteric fever among the military from the civil population rests in a disbelief on the part of some, and a statement of denial on the part of a few, that this disease is one from which the natives of India suffer." Yet even at that time the susceptibility of the native (half-caste also) to the disease, both in his own country and when outside it, was beyond all doubt, the only questions open being the degree to which the disease prevailed, the modifications it possibly assumed, and the period of life during which it was mainly represented among them. It was on these points noted that according to the Annual Health Report of Calcutta for 1880 a considerable amount of fatal fever of a *continued* type existed among natives irrespective of race and that among children under one year of age there were many deaths from "a combination of fever and diarrhœa," and the suggestion was made that the reason why enteric fever was so seldom observed among adults coming under the notice of European medical men was that as in small-pox, so in this disease, an immunity had been purchased by an attack in early life. The means of diagnosis of the Indian fevers now available were not then existent and actual proof of the presence of enteric fever among natives as a common disease was not forthcoming and hence the continuance of doubt, but what was then wanting has now been fully supplied by the application of Widal's test to the blood. Some years ago Surgeon-Major Freyer of the Army Medical Service brought forward some results of the application of this method to the blood of adult natives in which the outcome of his observations suggested a prior attack of the disease as a possible and probable explanation, and the publication referred to in the early part of this letter may, I take it, be regarded as conclusive of the subject under consideration. Captain Rogers (p. 1504) writes: "The above brief summary is sufficient to prove that typhoid fever is a common continued fever of the natives of India and that it differs in no noteworthy respect from the same disease in Europeans in this country," and (p. 1508) "the so-called 'non-malarial remittent' fever in natives has been shown by the serum test to be nothing but typhoid fever." And the notice in the Army Medical Report, 1901 (p. 160), is: "It is now generally admitted not only that enteric fever does attack natives of India but that cases are by no means of such rare occurrence as was at one time supposed. At Kirkee seven natives were treated for the disease during the year in the native section of the station hospital, the diagnosis in each case being verified by Widal's test. At Peshawur, during the time that enteric fever was most prevalent among the troops, there were several suspicious deaths from fevers in the Royal Artillery and Light Infantry Bazaars, and at Quetta cases resembling enteric fever occurred among natives just before the disease broke out in barracks. In the Barrackpore report the occurrence of enteric fever among the native population is put forward as an explanation of isolated cases among the troops." And, indeed, so far as the last sentence is concerned this is the view taken and enunciated by some of us for the last 20 years at least.

Hence, then, the view taken by your reviewer of the Report of the Sanitary Commissioner with the Government of India for 1897 in THE LANCET of August 19th, 1899, p. 495, that, assuming enteric fever to be a parasitic disease, "the bacillus must be very widely distributed in India," and to which I replied in a letter to you[2] giving details tending to meet that requirement, is confirmed beyond all reasonable doubt, and now I presume that we may all settle down in the conviction that enteric fever, wherever met with and in whatever race, is one and the same disease and that, so far as the army is concerned, the source of its disease, putting aside occasional importation and occasional transfer in its own coterie, is everywhere the civil and native community of the country in which it is quartered, and that the means for its curtailment (the idea of elimination not being reasonable under the conditions which exist) are to be sought in the reduction of the very susceptible human material sent out to India and elsewhere and the safeguarding as far as possible of the lines of communication between the native and military sections.—I am, Sirs, yours faithfully,

FRANCIS H. WELCH,
Surgeon-Colonel (retired), A M S.

Lee, June 15th, 1903.

THE IMPERIAL VACCINATION LEAGUE.

To the Editors of THE LANCET.

SIRS,—The Imperial Vaccination League has now been in existence for a year. It has had in view two objects: first, to study the working of the Vaccination Act of 1898 in order to consider if in any way the Act or its administration can be improved and the opposition to vaccination diminished; and, secondly, to press upon the attention of all classes of the community the immense value of vaccination and revaccination as a protection against epidemic small-pox The league has so far been mainly occupied in making a critical study of the Vaccination Act of 1898. As a result of this study it recommends the general compulsory revaccination of children before leaving school; the extension of the conscience clause to revaccination as well as to primary vaccination; the transference of the vaccination laws from the Poor-law to some other authority charged with public health functions; that the same security of tenure be given to the public vaccinator as is now enjoyed by the vaccination officer; and that all establishments for the preparation in England of calf lymph be placed under Government inspection or control. The league does not approach the subject of the administration of the Vaccination Act from the point of view of the interests of the medical profession or of the public vaccinators. It inquires only what will best promote vaccination among those sections of society now prejudiced against it. Should it appear on investigation that the cost of vaccination under the Act of 1898 has been in some cases unreasonably great the league would favour its being reduced. It believes it to be of the utmost importance that the medical profession should be moderate in its pecuniary demands, that nothing should be done to make martyrs of anti-vaccinationists, and that vaccination and revaccination should be efficient as well as obligatory.

The league was formally constituted at a large and influential meeting of its members, over which the Duke of Northumberland presided, on Dec. 12th, 1902. On Jan. 14th, 1903, a deputation representing merchants, bankers, shipowners, large employers of labour, municipal authorities, dockyard companies, heads of public schools and colleges, solicitors, insurance companies, sanitary authorities, the Royal Colleges of Physicians and Surgeons, wharfingers, traders, givers of concerts and influential persons generally, waited on the Right Hon. Walter Long, M.P., President of the Local Government Board, to urge upon him the importance of making revaccination obligatory before the legal age for employment and of providing an adequate supply of glycerinated calf lymph available for all classes of the community. Many sheets of signatures of influential persons in support of obligatory revaccination were handed to Mr. Long by members of the deputation. The President, in reply, urged the league to extend its work into the country, and especially to assist candidates at Parliamentary elections to meet the pressure put upon them by the opponents of vaccination. The league desires to act upon Mr. Long's advice. It has recently issued a paper entitled, "Ten Answers to Questions on the Subject of Vaccination for the Use of Parliamentary Candidates" which can be had from the Secretary of the Imperial Vaccination League, 53, Berners street, London, W. A political secretary (Dr. Rees Roberts) has been appointed whose duty it will be to attend Parliamentary elections and to form local committees in defence of vaccination. For this extension of the work of the league an additional sum of £500 a year for three years will be required. The executive committee desires to find 100 friends who will each promise five guineas a year for three years, or a larger number who will make up the amount wanted in smaller sums. It is not probable that the effort to produce a Revaccination Act need last much more than three years. Such an Act can be passed within that time if the Government a country desire it. If, on the other hand, people d prefer frequent epidemics of small-pox to vaccin must have their own way and take the consequen while the league will do what is possible majority to other and more social views. Subscriptions or donations to the funds of the league may be sent by crossed cheque to the Secretary, Imperial Vaccination League, 53, Berners street, London, W., or to myself.

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[2] THE LANCET, Sept. 9th, 1899, p. 739.

I am, Sirs, yours faithfully,
E. GARRETT ANDERSON,
Honorary Secretary, Imperial Vaccination League.
4, Upper Berkeley-street, London, W., June 20th, 1903.

BLOOD PRESSURE.

To the Editors of THE LANCET.

SIRS,—I have to thank your correspondent Dr. O. P. White, writing in THE LANCET of June 20th, p. 1767, for a correction—the term "cubic" having unfortunately crept into the type-written copy of my address[1] in connexion with millimetres of mercury pressure, that term being, as he says, the measure of volume. With regard to Dr. White's reference to the diminution of the partial pressure of the oxygen in the higher altitudes being possibly the cause of the rise in blood pressure, it may, I think, be an important factor in the background as it were; but I am disposed to think that other causes are at work. My conclusions were strictly limited to the data observed, which pointed to the proximate causes of the rise. I am satisfied that the primary effect of altitude is to lower the arterial pressure and that in winter this effect is apparent in the medium altitudes; but that in the higher altitudes other factors of causation step in which raise the pressure It is possible, for instance, that temperature is one of these. The whole subject requires further investigation. When the Yungfrau railway is extended to 13,366 feet a good opportunity for this inquiry will be afforded, inasmuch as the railway carriage will provide the important conditions of rest and equable temperature. The interesting paper of Dr. Theodore Zangger in your issue of this week shows the necessity for such an inquiry and I am looking forward to an opportunity of doing further work in this direction. Dr. White mentions the increased pulse-rate in balloon ascents up to the height of 24,000 feet, which is interesting, but may not the psychological element in ballooning somewhat impair the reliability of any conclusion as to the effect of altitude on the pulse-rate?

I am, Sirs, yours faithfully,
GEORGE OLIVER, M D., F.R.C.P. Lond.
Harrogate, June 20th, 1903.

SYPHILIS—A QUESTION OF PROCEDURE.

To the Editors of THE LANCET.

SIRS,—I should very much like to know what is the proper course of procedure in the following case.

A patient is seen at the out-patient department of a hospital and is found to have secondary syphilis with ulcerations of tonsils, lips, &c. He states that he is a baker's assistant and that whilst not handling the dough *he handles the baked loaves just prior to their being sent out for consumption.* On being told that he must not continue this work he refuses, saying that he cannot afford to give up his "job"

What course should I adopt? 1. Should I write to his employer? If in this case he is dismissed, do I render myself liable for damages in a court of law? 2 Should I communicate with the medical officer of health of the district? And if he is subsequently dismissed owing to this officer's action, do I still render myself liable? 3 Should I take no notice and allow this filthy state of things to continue?

I am, Sirs, yours faithfully,
J. GAY FRENCH, M.B. Lond., M.R.C.S. Eng.,
L.R.C.P. Lond.
June 22nd, 1903.

⁂ 1. The employer cannot be written to without a breach of professional confidence. But the breach would, we think, be pardonable. It is a complete answer to any civil proceedings for libel or slander that the statement complained of is true, and to any criminal proceedings that it has been made in the public interest. 2. The medical officer of health might be communicated with but his power of interference is not evident to us as syphilis is not a notifiable disease. 3. We think that a distinct warning might be given to the unfortunate sufferer that unless he desists from his work until he is no longer infectious his plight must be revealed to his employer—a threat, the legality of which is perhaps doubtful. Dr. French should ascertain the views of the hospital authorities. This is important.—ED. L.

APPENDICITIS: A SUGGESTED REASON FOR ITS INCREASE.

To the Editors of THE LANCET.

SIRS,—The occurrence at the same time in one's own private practice of three cases of appendicitis, each demanding operation, is provocative of thought. Ten years ago cases of "perityphlitis" came under notice occasionally and a certain number of people were taken ill and died from "inflammation of the bowels" or "acute peritonitis" in whom an appendicitis was probably at the root of the mischief. My recollection is that such cases were rare and I do not remember one appendicectomy at the Royal Infirmary, Liverpool, *during my period of studentship*, 1887–91. At the present time appendicitis is about us on every hand. The reason for its sudden increase has yet to be shown. I do not believe it to be due to any process of evolution; the same people are having appendicitis now who did not have it ten years ago. The cause, whatever it is, must be one affecting the mass of the people, rich and poor; it must be common to all countries of high civilisation and big towns; it must be coincident with the increase in the disease.

The present conditions of food supply and distribution may give the key to the situation. Probably four-fifths of the chief perishable comestibles are frozen or chilled for transmission or collection before reaching the consumer. Chilled or frozen meat, fish, poultry, rabbits, game, &c., are notoriously prone to rapid decomposition when removed from cold store; also, they degenerate more rapidly after cooking than unfrozen articles. Following the argument it may be that the ingestion of chilled or frozen food especially liable to rapid decomposition may result in a more septic state of the intestine than in the pre-cold storage days, and this greater septicity may in its turn account for the greater virulence of those irritations to which the cæcum and appendix have always been prone.

I am, Sirs, yours faithfully,
S. KELLETT SMITH, F.R.C.S. Eng.
Liverpool, June 22nd, 1903.

THE GENERAL MEDICAL COUNCIL AND THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—The letter of Dr. R. W. C. Pierce in THE LANCET of June 20th, p. 1768, is interesting as evidence of a "reversal of policy" on the part of the Colleges. This is to be expected. The increasing number of universities in the provinces and the establishment of facilities for obtaining medical degrees in London tend to diminish the demand for the Conjoint diploma, for no man will take a diploma when he has reasonable facilities for taking a degree, provided the respective standards nearly approximate. It is on these grounds that the Colleges should, I submit, be merged into the University of London, for though the Colleges have done good work in the past the days of the diploma are quickly passing by.

I am, Sirs, yours faithfully,
Brighton, June 20th, 1903. FREDK. W. COLLINGWOOD.

MOLYNEUX'S PROBLEM.

To the Editors of THE LANCET.

SIRS,—Dr. A. M. Ramsay's report of the case of a Man Blind from Congenital Cataract who Acquired Sight after an Operation when he was 30 years of age, given in THE LANCET of May 16th, p. 1354, is of extreme interest to students of psychology. There is one point on which further explanation would be welcomed. Dr. Ramsay says: "When asked to distinguish between a ball and a toy brick he looked at them for a considerable time ...... and then he described both correctly." It cannot be meant that he said: "This is a sphere and that is a rectangular parallelopiped," or something equivalent. Even with normal eyes and lifelong experience it is not possible to see a sphere as a sphere or a cube as a cube. Molyneux, in stating his famous problem, supposed, as I understand him, that the patient was told that one of the bodies shown him was a cube and the other a sphere and was only asked to say which was the cube and which was the sphere. Was it in this way that Dr. Ramsay's patient was tested? Even Dr. Franz's patient, whose case is so carefully reported in the Philosophical Transactions for 1841, does not seem to have been tested in this way, although we may perhaps conjecture what the result would have been from the fact that he said he saw the cube as a quadrangular figure and the ball as a disc. If Dr. Ramsay's patient was simply asked to say which was the ball and which was the brick this would, I believe, be the first case in which Molyneux's problem was tried as he stated it.

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[1] THE LANCET, June 13th, 1903, p. 1645.

I am, Sirs, yours faithfully,

Trinity College, Dublin, June 22nd, 1903. T. K. ABBOTT.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Legacies to Local Charities.

Mr. Thomas Best, the survivor of two brothers who had for many years carried on a successful manufacturing business in this city, has bequeathed his entire fortune, amounting to over £100,000, to various charitable objects. The destination of about half this sum was decided by the will, the other half being left in trust to the Lord Mayor and corporation, in order that they may invest it and apply the annual income for the purposes of institutions in Birmingham and the Midland counties supported, at least in part, by public subscriptions. The specified moiety goes to various institutions in the city, the more important bequests to hospitals being £5000 each to the General Hospital and the General Dispensary, £4000 each to the Blind and Deaf and Dumb Institutions, £3000 to the Queen's Hospital, £2000 each to the Children's, Women's, and Orthopædic Hospitals, and £1000 each to the Eye and Ear and Throat Hospitals. Mr. Best was no doubt justified in trusting the disposition of one half of his fortune to the discretion of others, but that such a method of dealing with one's worldly goods may sometimes be a doubtful policy is illustrated by another series of gifts which have recently been made public. Dr. Griffiths of Washwood Heath, who recently died, had been for many years a well-known and much respected general practitioner in the eastern division of the city and one of the members of the corporation. Instead of deciding for himself as to the objects to which his money should be devoted he left the disposition of it to trustees. It must be confessed that it is difficult to suppose that the late medical gentleman would have approved of some of the objects to which his money has been devoted by those in whose hands he placed its distribution. It seems unlikely that he would have selected the Homœopathic Hospital as the recipient of £200, nor, considering the feelings entertained towards the General Dispensary by general practitioners, can one suppose that he would have selected that institution as one which should benefit by his generosity to the tune of £100. Finally, a similar sum given to the University is to be applied to the purchase of books for the department of English literature, though the medical school has many crying necessities, towards the satisfaction of which a gift of such a sum would have been very acceptable. The way in which this money has been distributed will perhaps give pause to medical men contemplating a similar method of disposing of their wealth after their death.

Medical Benevolent Society.

The eighty-first annual meeting of this society was held on May 29th, when Mr. M. A. Messiter of Dudley was elected President and Dr. E. Malins President-elect. It was announced that the invested funds of the society amounted to £15,688 4*s.* 6*d.*, that there were 414 members on the books, and that a sum of £659 had been expended during the year in grants and Christmas donations. To the sum mentioned above will have to be added an amount of £5000, less legacy

interests. When it comes into the possession of the soc this sum of money is to be invested and called "the Duncal Benevolent Fund."

Hospital Saturday Fund.

Saturday, June 13th, was the day set aside for the annu collection for this fund. The full amount has not yet bee received but it will obviously be larger than in any previo year. As on former occasions Alderman Cook, the chai man of the executive committee, entertained the membe of that body to tea after the conclusion of their labours f the day. In the speech which he made on that occasion th alderman congratulated the committee on the fact that th prospects of raising the £20,000 which they desired we very bright. No less a sum than £278,855 had been receive from the citizens in connexion with the fund during th last 30 years—a truly wonderful record. He desired to s the time when it would be possible to establish a sanatoriu for consumptives under the auspices of the fund. Such institution was greatly needed and when its establishme was possible he was confident that the Hospital Saturda executive would be able to carry on the work as well as an other body in Birmingham. The Lord Mayor in his spee strongly supported the suggestion that such a sanatoriu should be started for the use of the working classes of th city.

Crippled Children.

A conference on the subject of the welfare of crippl children has just been held at the Women's Settlement i this city. It was presided over by Miss Dale, one of th members of the education committee of the city, and the were present representatives of nearly all the organisatio in the country for the care of crippled children. Before th reading of papers most of the delegates visited the speci school maintained by the education committee for this cla of children and were shown the ambulance which conve the scholars from their homes to the school which is situate in Dean-street. In a paper by Miss Fisher of the Manchest University Settlement it was stated that the actual numb of cripples in the country was not known, but that M Knipe, honorary secretary of the National Industrial Hom for Crippled Boys, estimated the number in 1888 as 100,00 In Birmingham there were 537 crippled children known t the union. Dr. F. Warner estimated that three in ever 1000 of the children attending public elementary schools i London were maimed, crippled, or deformed. Accurat figures about those who were unable to attend school we unobtainable. As to the nature of the disablement, mor than half of the cases were due to hip, spine, and other bon diseases; infantile paralysis came next, and then ricket amputations, and deformity. In many cases a slight inju was aggravated by carelessness and neglect or by a mi taken kindness which prevented parents from taking the crippled children to a hospital.

Deaf and Dumb Institution.

The annual meeting of the friends of this charity ha recently been held under the presidency of the Lord Mayo There had been no recurrence of the epidemic of scarlet fev which had visited the institution in the previous year. Th committee had again found it necessary to appropriate £5 from the legacy fund towards meeting the year's deficienc of ordinary income, which amounted to over £1000.

Hospital for Women.

A sum of £320 has been handed over to the committee o this hospital by the Master Bakers and Millers' Associ tion as the result of a football match and sports hel in May last in the grounds of the Aston Villa Footba Club. At the annual meeting of the committee responsib for the church parade and service held each year for th benefit of the Women's Hospital by the Sparbrook and Di trict Amalgamated Friendly Societies the chairman me tioned that last year £260 were raised for the hospital an expressed the hope that this year the contribution would n be less than £300. Councillor Nettlefold said that designing the new hospital the committee started with high ideal because it felt that if it did not aim at moon it would hit nothing worth having. Whilst it strive for one of the best hos [illegible] its kind in the Kingdom the committee di [illegible] to be a replete with all sorts of fa ago its policy of inq meeting of the hospital committee that £29,325 had been raised towards the £30,000 which it had determined to raise before starting upon the work of the building. The new hospital would, however, cost £40,000, and he wished that the committee could have collected the entire sum before commencing operations.

Queen Victoria Nursing Institution, Wolverhampton.

The annual report of this charity shows that the present staff consists of 30 fully trained medical and surgical nurses, who have during the year attended 255 cases under 92 medical men. During the year 91 operations have been performed and altogether 107 patients have been admitted—an increase of 50 on the previous year. Increased accommodation has been provided at the institution by the addition of another room. A resident assistant to the lady superintendent has been appointed on account of the great increase in the work of this official. The district home has been removed to Waterloo-road, South, but regret is expressed that the appeal for increased subscriptions for this part of the work has not met with an adequate response The statement of accounts shows that, including the balance in hand, the receipts have amounted to £2346, including £1273 as fees for nursing. The balance in hand amounts to £263 The report with regard to the District Nurses' Home shows that 1074 cases were attended during the past year and that he nurses paid 21,681 visits.

June 23rd,

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Late Dr. J. B. Nevins.

THE late Dr. Nevins, who died on June 10th, at the venerble age of 84 years, was one of the most estimable citizens f Liverpool and had been for many years a leader of ntellectual thought in the city. His literary achievements ere of the highest order. His habits of life conduced to is acquiring knowledge. He was a busy worker all his ife. He was twice president of the Literary and Philoophical Society of Liverpool, firstly from 1869–72 and econdly from 1894–96. He was elected president of the iverpool Medical Institution in 1886, an office which he illed with credit for two years. He took an enthusiastic nterest in all public questions and there were few benevolent r philanthropic institutions in the city with which he was ot associated. Up to a recent period he was to be seen lmost daily in the streets, his brisk walk and alert anner showing few traces of his great age. An attack f influenza, aggravated by a weak heart, compelled him o take to bed a few weeks ago, and he gradually sucumbed. His funeral, which took place on June 13th, was ttended by a large concourse of citizens of all shades of pinion, including members of philanthropic, literary, and cientific societies, the medical profession being largely epresented.

Royal Institute of Public Health, Liverpool Congress.

The arrangements for the meetings of the Royal Institute f Public Health are now nearly complete. The large hall t St. George's Hall will be open daily for the purpose of suing tickets, &c., to members desirous of attending the ongress. The Congress will be opened on July 15th y an address by the President (the Earl of Derby, .G.) in the small concert room at St. George's Hall. he presentation of the Harben medals for the years 901 and 1902 to Sir Charles A. Cameron, C.B., and r. W. R. Smith, will then be made. Delegates and embers are requested to wear municipal or academic obes. The sections will include child study and school ealth, also domestic sanitation and engineering, &c. he meetings of these sections will take place at the niversity College. At the adjournment of the proceedngs of the housing section a visit will be paid to Port unlight for the purpose of inspecting the model village nd works there; Mr. W. H. Lever, the proprietor, will indly provide a luncheon for the visitors. Among the arious entertainments provided will be a *soirée* at the alker Art Gallery, a garden party at the private residence f the Lord Mayor of Liverpool, a cruise on the Mersey, xcursions to Chester, to Eaton Hall, to Llandudno, and to e Menai Straits, and a visit to the Delamere Forest Sanaorium. The congress dinner will take place on July 20th, to which ladies are invited. Dr. E. W. Hope is the honorary general secretary and Dr. A. A. Mussen is the assistant secretary.

The Anatomical Society of Great Britain and Ireland.

The annual summer meeting of this society took place on June 19th and 20th at University College, Mr. C. B. Lockwood (London) presiding. Amongst those present were Principal Sir William Turner, K.C.B. (Edinburgh), Sir W. M. Banks (Liverpool), Professor D. J. Cunningham (Edinburgh), Professor H. Young (Manchester), Professor G. D. Thane (London), Professor J. Symington (Belfast), and Professor A. Robinson. Professor Robinson contributed an interesting paper on the Development of the Cranial Form in Man. He described experiments showing that the form of the skull was closely associated with the size and leverage of the lower jaw. Professor Symington gave a demonstration on the Relation of the Deeper Parts of the Brain to its Surface. The annual dinner of the society took place at the Adelphi Hotel on the evening of June 19th, when some 40 members were present.

Continued Abatement of the Small-pox Epidemic in Liverpool.

29 new cases of small-pox were notified to the health authorities during the week ending June 18th, which showed a marked decrease on previous weeks. There were 165 cases in hospital at the same date, as compared with 198 on June 4th and 335 on March 19th, showing a decrease of 50 per cent. in the number of cases in hospital at the end of the quarter.

Lectures on Tropical Ophthalmology.

Major H. Herbert, I.M.S., professor of ophthalmic medicine and surgery, Grant Medical College, Bombay, delivered two lectures to the students of the Liverpool School of Tropical Medicine in the lecture-room of the Thompson-Yates Laboratory on June 18th and 19th on Some Special Points in Tropical Ophthalmology. The lectures were highly interesting and were much appreciated by a large audience.

Birkenhead Children's Hospital.

The High Sheriff of Cheshire, Mr. T. B. Royden, opened the new wing recently added to the Birkenhead and Wirral Children's Hospital on June 12th, in the presence of a company which included the Bishop of Chester, the Bishop of Shrewsbury, the Mayor and Mayoress of Birkenhead (Dr. and Mrs. R. Owen Morris), and others. The chairman of the hospital (Mr. J. Elliot) sketched the growth of the hos-

for the shelter of perambulators; on the first floor there are five bedrooms, a dining-room, bath-room, &c.; and on the second floor five more bedrooms, &c. This accommodation is for the nursing staff who have hitherto been much cramped in the main building through want of space. The building and furniture have cost £3360, of which £650 have yet to be found. Last year the hospital admitted 540 patients, and there were 6234 out-patients.

June 23rd.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

University of Wales.

Dr. Andrew Francis Dixon, who has been during the past six years professor of anatomy and dean of the faculty of medicine at University College, Cardiff, has been elected to the chair of anatomy, Trinity College, Dublin, in succession to Professor D. J. Cunningham. The Cardiff School of Medicine loses a most capable administrator through the resignation of Professor Dixon.—Mr. K. J. V. Orton, M.A., F.C.S., assistant lecturer on chemistry at St. Bartholomew's Hospital Medical School, has been appointed professor of chemistry to the Bangor College of the University of Wales.

Appointment of Colliery Surgeon at Maerdy.

The final ballot of the men working at the Maerdy collieries in the Rhondda valleys for the election of a surgeon to succeed the late Dr. Benjamin Griffiths has resulted in the appointment of Dr S. Glanville Morris of Nantgaredig,